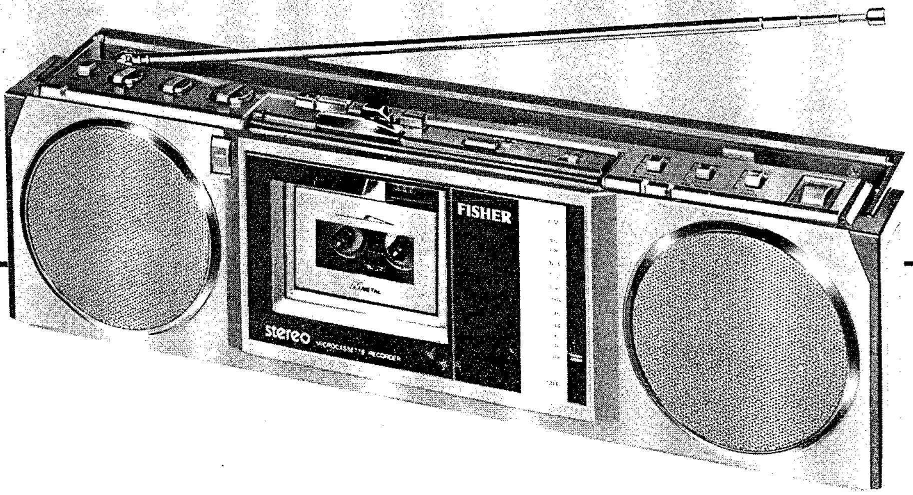
SERVICE MANUAL

FISHER

PHM-88

(EUROPE)

AM/FM Stereo Radio with Detachable Stereo Microcassette Recorder



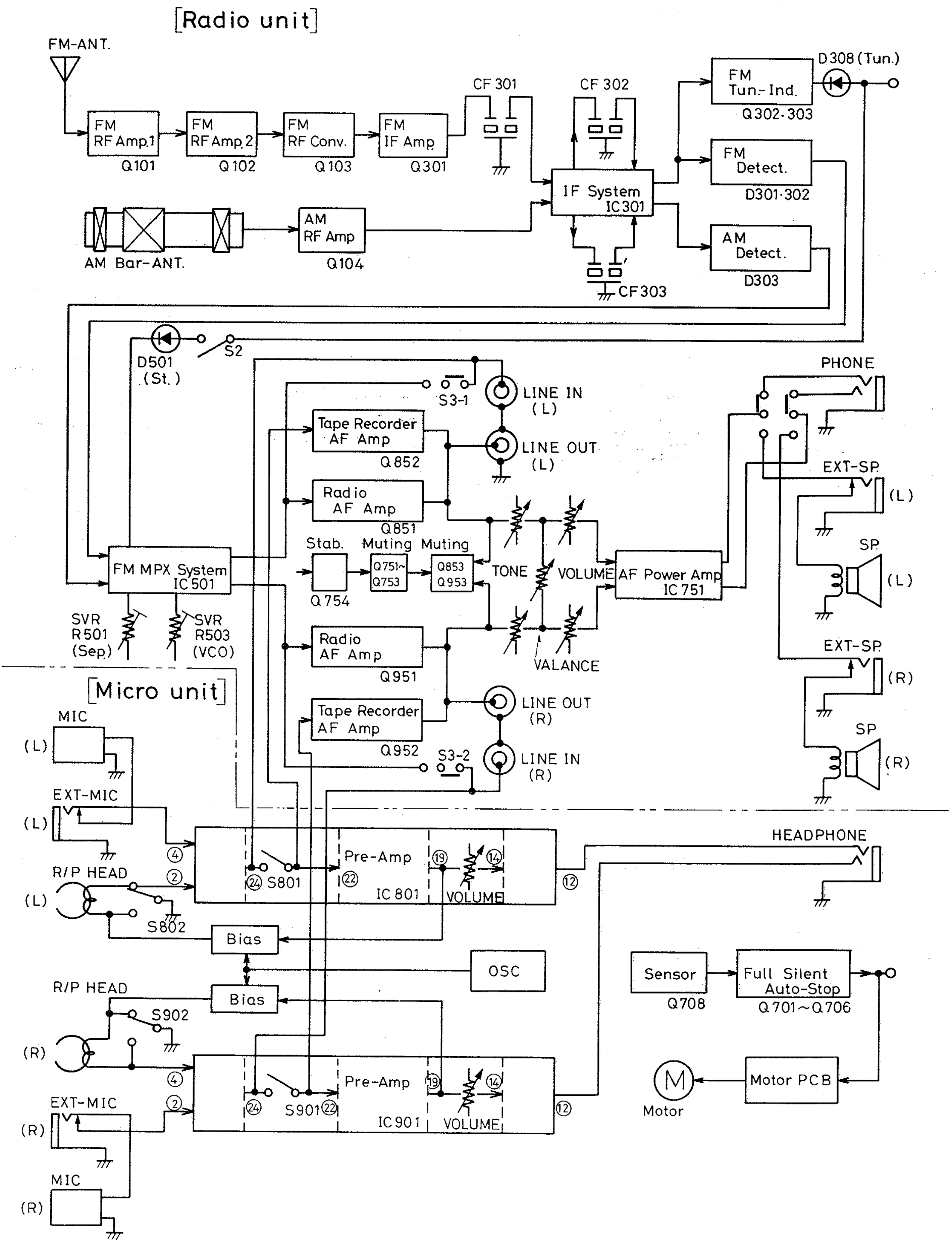
The first name in high fidelity

SPECIFICATIONS

Radio Section	
Radio tuning ranges	AM: 530 – 1,605kHz FM: 88 – 108MHz
Micro Cassette Section	
Recording system	AC bias
Erasing system	Magnet erase
Signal-to-noise ratio	40dB
Frequency response	100Hz – 8kHz (metal tape)
General	
Loudspeaker	3″ (77mm x 2)
Power source	Micro: DC 3V, 2 each size AA batteries Receiver: DC 6V, 4 each size C batteries AC: AC adaptor
Dimensions (W x H x D)	Micro: 5-1/4″ x 2-1/2″ x 1″ Receiver: 13″ x 3-2/3″ x 2″
Weight	Micro: 10 lbs. Receiver: 2 lbs. 3 ozs.

* Specifications subject to change without notice.

BLOCK DIAGRAM



DISASSEMBLING PROCEDURE

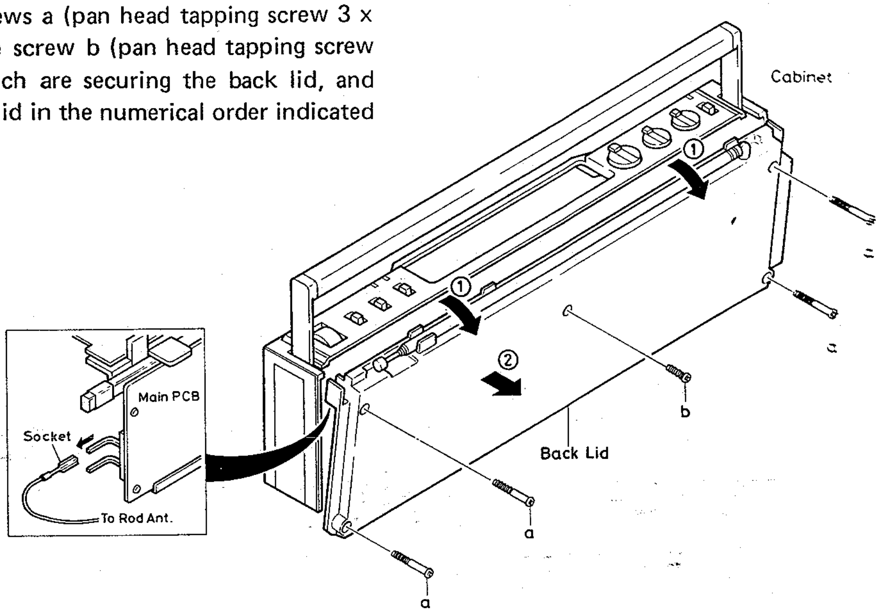
Remove the battery from battery case, or pull off the AC adaptor. Separate the micro unit and radio unit if mounted.

Radio unit

(1) Dismounting the back lid

a. Remove four screws a (pan head tapping screw 3 x 25 mm) and one screw b (pan head tapping screw 3 x 12 mm) which are securing the back lid, and detach the back lid in the numerical order indicated by arrows.

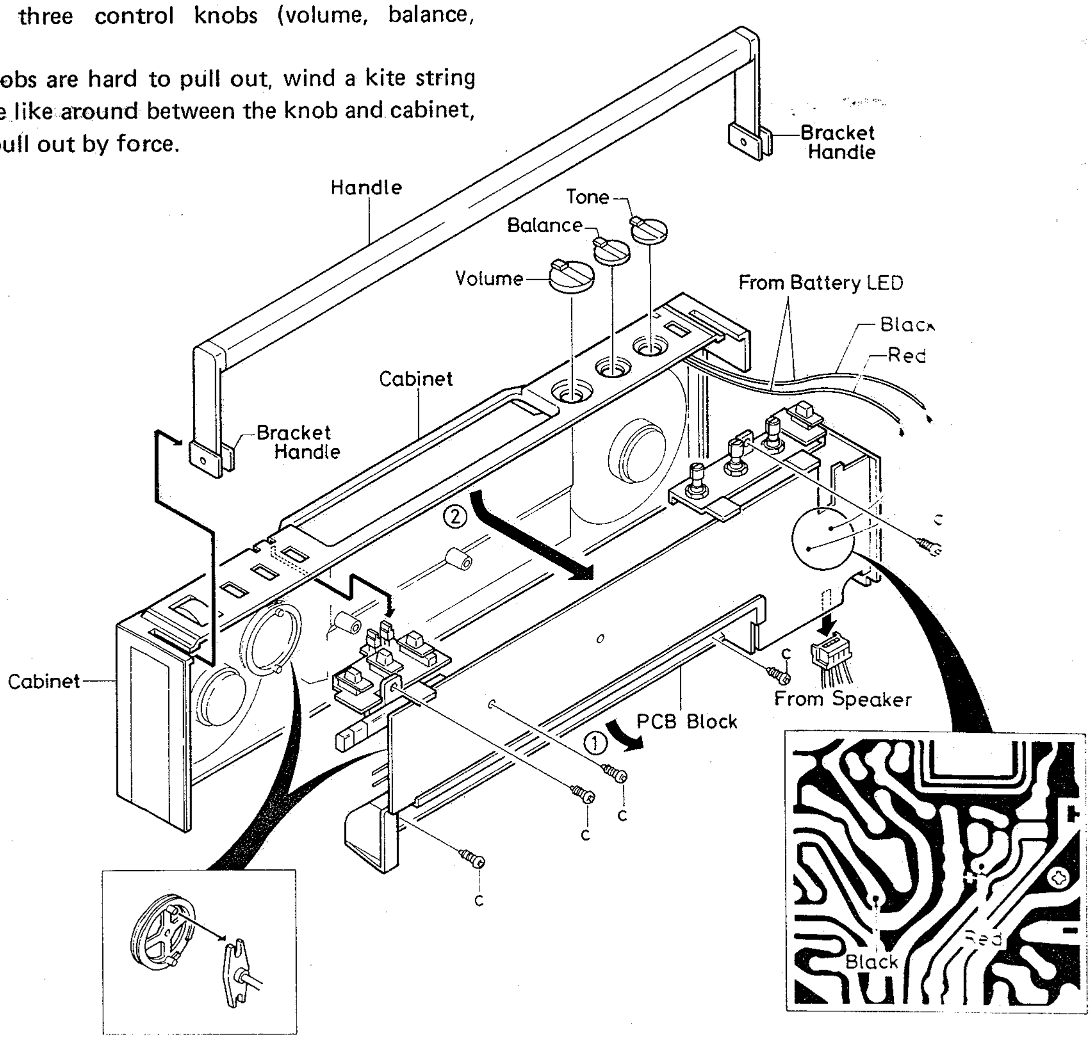
b. Pull out the socket connecting the rod antenna and PCB. Then the back lid can be separated completely.



(2) Dismounting the cabinet

a. Remove three control knobs (volume, balance, tone).

* If knobs are hard to pull out, wind a kite string or the like around between the knob and cabinet, and pull out by force.



b. Remove five screws c (pan head tapping screw 3 x 10 mm) fastening the cabinet and PCB block.

c. Remove soldering of two lead wires coming from the LED PCB and separate the battery case side of the PCB block by pushing it down (arrows 1 and 2).

d. Detach the speaker socket which is connecting the cabinet and PCB block together. Then the cabinet can be separated from the PCB block.

* When mounting, pay attention to the fitting of tuning LED (green) and FM stereo LED (red) with the cabinet, and between the bracket and drum of variable capacitor. (Refer to the method of dial rope threading.)

Micro unit

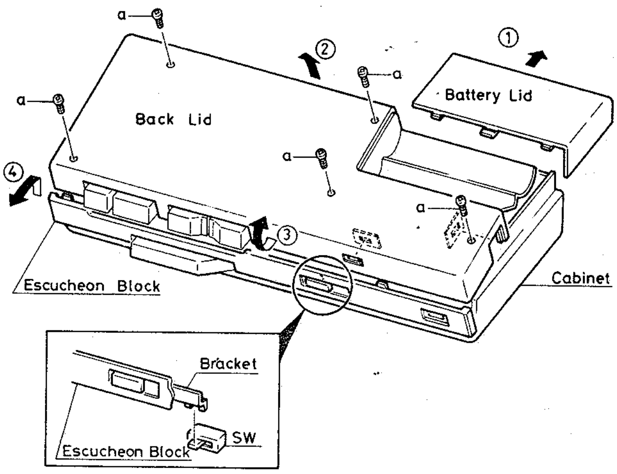
(1) Dismounting the back lid

a. Remove the battery lid (arrow 1).

b. Remove five screws a (Special Screw 1.7 x 5 mm) securing the back lid.

c. Take out the back lid by guiding beneath the slide knob of switch (S709) (arrows 2 and 3). At this time, the escutcheon block is also detached (arrow 4)

* When mounting, pay attention to the fitting of the escutcheon block and pause button (S703), and put on switch covers without fail.



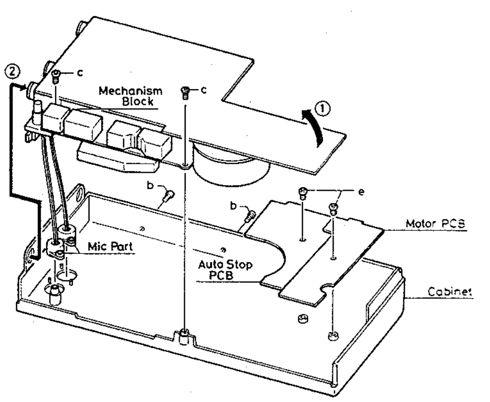
(2) Dismounting the cabinet

a. Remove two screws c (Special Screw 1.7 x 5 mm) and another two screws d (Special Screw 1.7 x 4 mm) which are securing the cabinet and mechanism block.

b. Remobe two screws e (Special Screw 1.7 x 3 mm) fastening the motor PCB and autostop PCB, and detach the microphone part.

c. Dismount the mechanism block in the numerical order indicated by arrows, then the cabinet can be separated.

* Be careful not to break the lead wires of PCB and microphone.



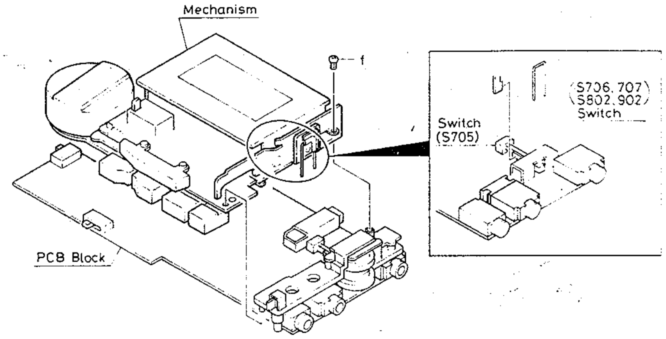
(3) Dismounting the mechanism

a. Remove a screw f (Special Screw 1.7 x 4 mm) securing the mechanism.

b. Liberate the fitting of chassis boss and mechanism hole.

c. Then, the mechanism can be separated from the main PCB.

* When mounting, pay attention to the fitting of switches with the mechanism and use care not to break the lead wires of motor and head.



Mechanism

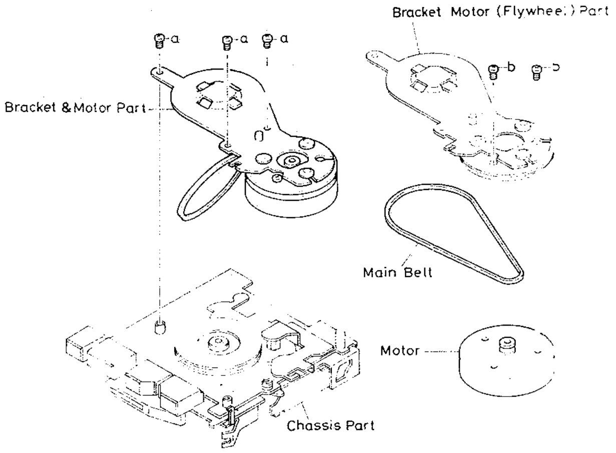
(1) Removing the belt

A. MAIN BELT

a. Remove three screws a (Special Screw 1.4 x 2 mm) securing the bracket and motor part.

b. Remove two screws b (Special Screw 1.6 x 2 mm) securing the motor.

c. Then the motor is detached, so that the main belt may be removed.



B. COUNTER BELT

a. Remove gear (flywheel).

b. Remove three screws c (Special Screw 1.4 x 1.8 mm) fastening the reel plate part.

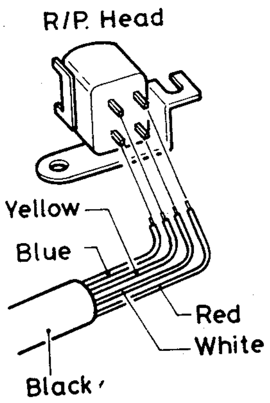
c. Detach the belt from the counter pulley, and, with REW button being depressed, dismount the reel plate part.

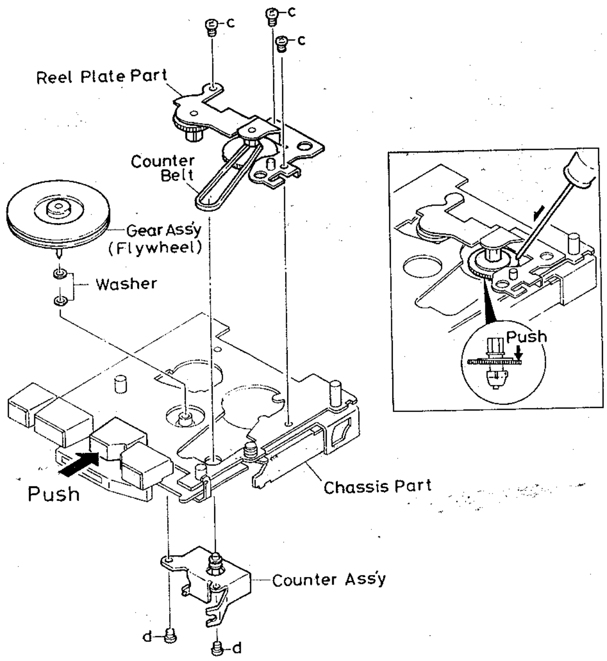
d. Take out the belt by passing beneath the reel plate.

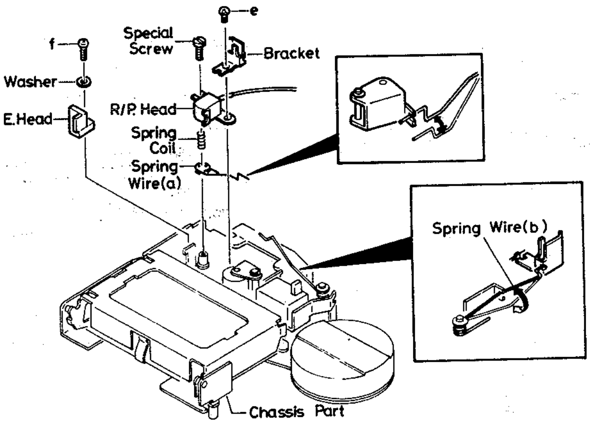
* When mounting the reel plate part, push up one end of the gear of the reel plate as shown in the drawing, so that it may be assembled easily.

(2) Dismounting the counter

a. Remove two screws d (Special Screw 1.4 x 2 mm) securing the counter, and it can be detached.







(3) Dismounting the heads

A. RECORD/PLAYBACK (R/P) HEAD

a. Dislocate the fulcrum of both spring wires (a) and (b) for the main slide as shown in the drawing.

b. Remove a screw e (Special Screw 1.7 x 3 mm) securing the head and a special screw for azimuth adjustment.

c. The connection of the head and lead wires is as shown in the sketch.

* Apply the fulcrum of spring wires (a) and (b) when mounting.

B. ERASE (E) HEAD

a. Remove a screw f (Special Screw 1.4 x 1.4 mm) securing the head.

NOTES

- After replacing the head, clean the head with head cleaner and demagnetize it with head eraser.
- Then adjust the azimuth of the head (refer to the mechanism adjustment section.

THREADING OF DIAL ROPE

(1) Preparation

a. Get ready a rope measuring 0.3ϕ x 500 mm, and tie it to the spring coil so that the folded length (inside) may be 173 mm.

(2) Procedure

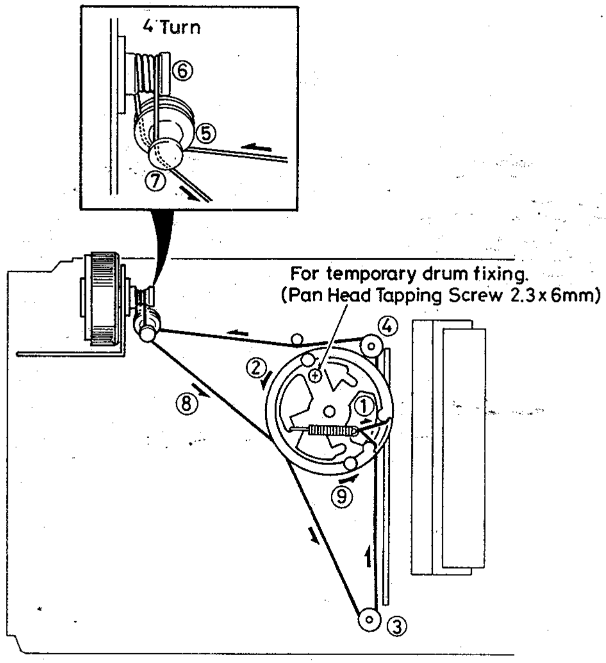
a. Temporarily secure the drum and bracket with pan head tapping screws 2.3 x 8 mm.

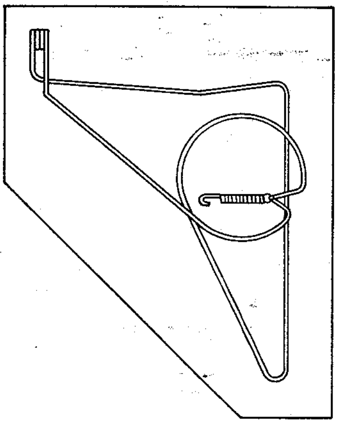
b. Apply the spring coil on the drum as shown, and thread the rope in the numerical order from 1 to 6, and wind four turns, then continue threading from 7 to 9, thereby returning to the spring coil.

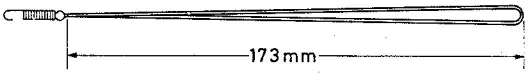
(3) Adjustment of pointer position

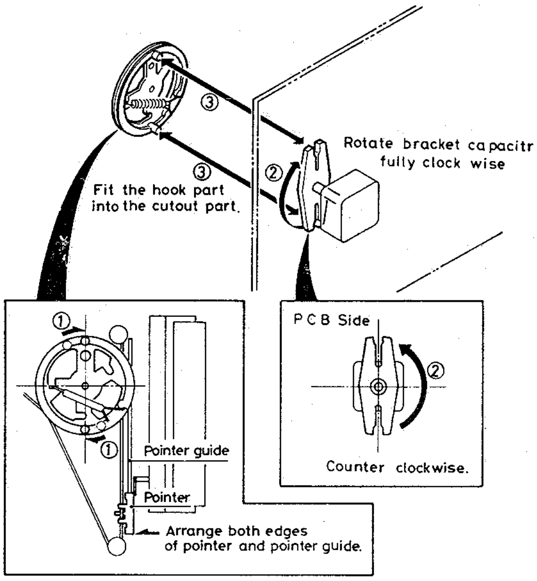
a. Remove the screws used in temporarily securing in (2)-a above. Turn the rotary knob for tuning until coinciding with the position of arrow 1, then turn the variable capacitor on the PCB in the direction of arrow 2 fully until completely fitting (arrow 3).

b. Under the state above, set the pointer to the aligned the position of the lower part of the pointer and the bottom of the pointer rail.

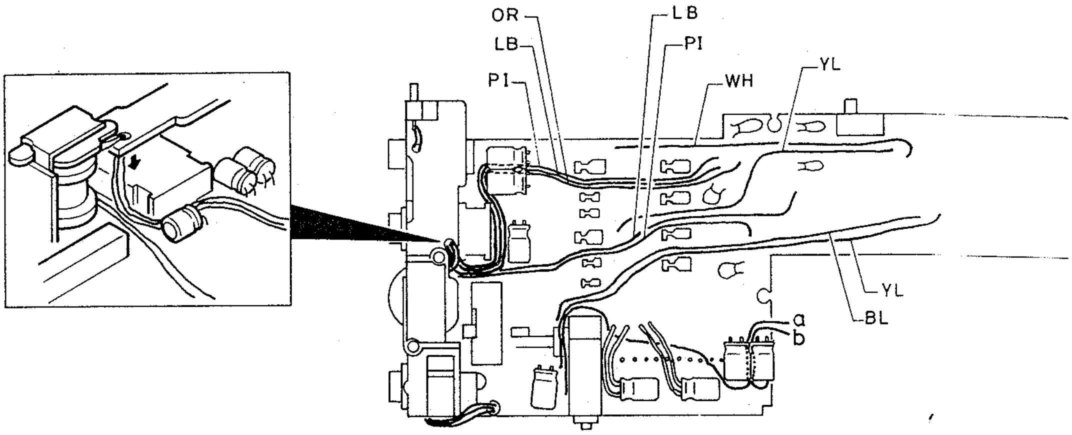




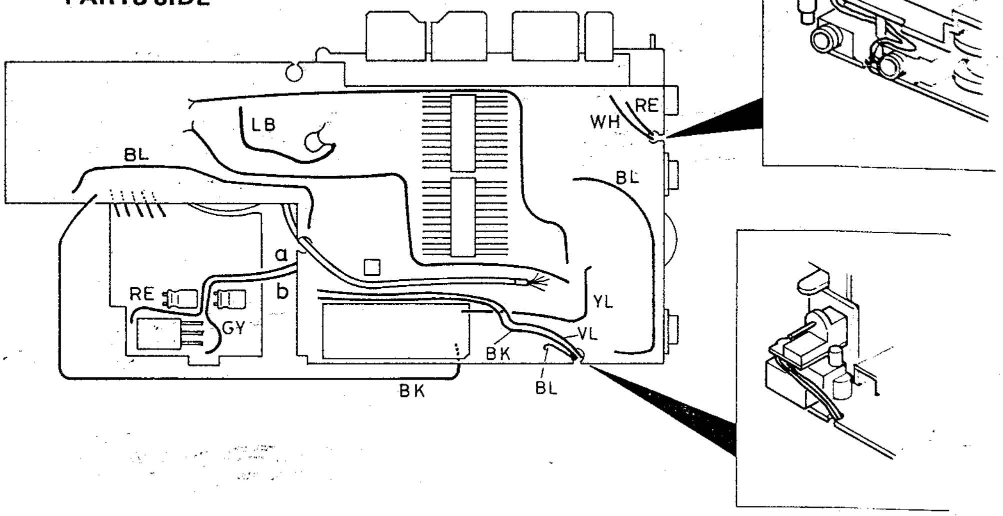



③
Rotate bracket capacitr fully clock wise
③
②
Fit the hook part into the cutout part.
①
①
Pointer guide
Pointer
Arrange both edges of pointer and pointer guide.
PCB Side
②
Counter clockwise.

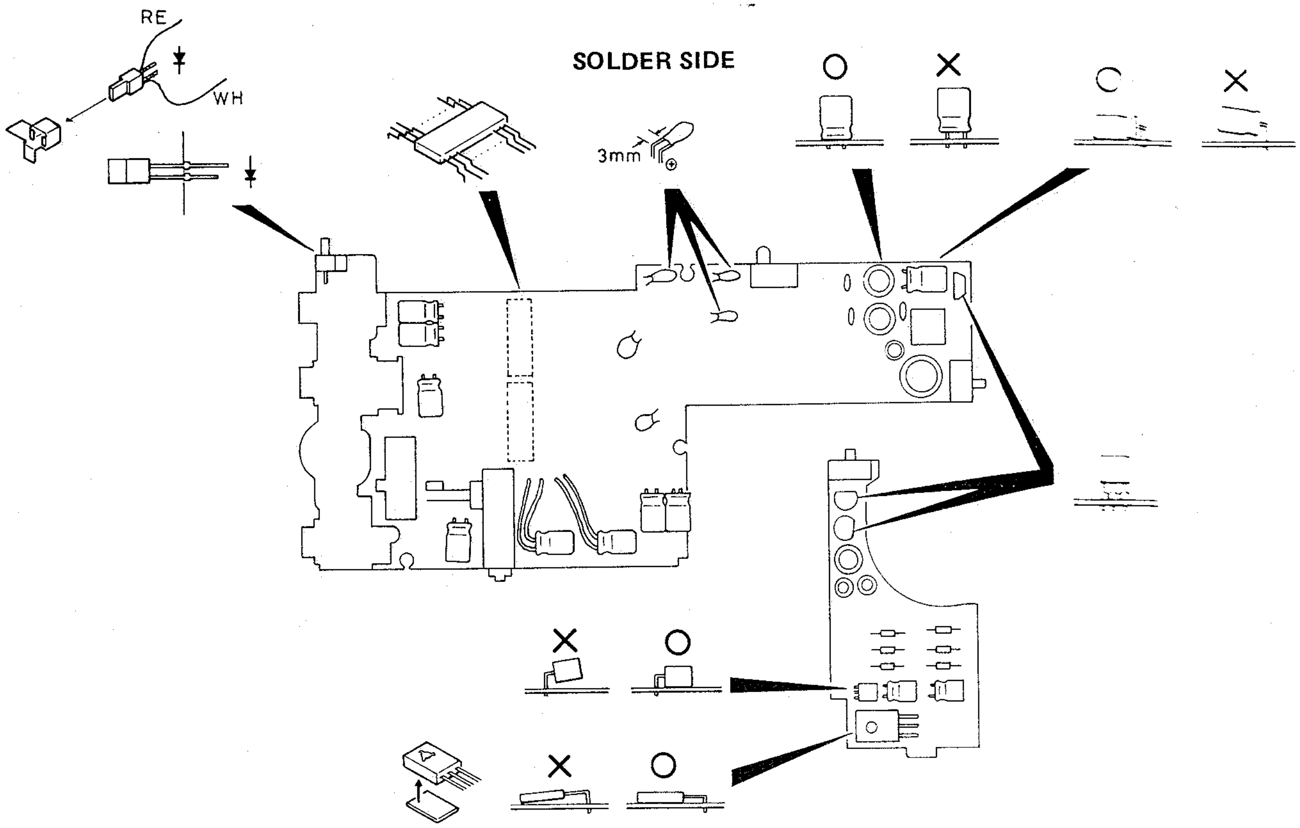
PARTS LOCATION



PARTS SIDE

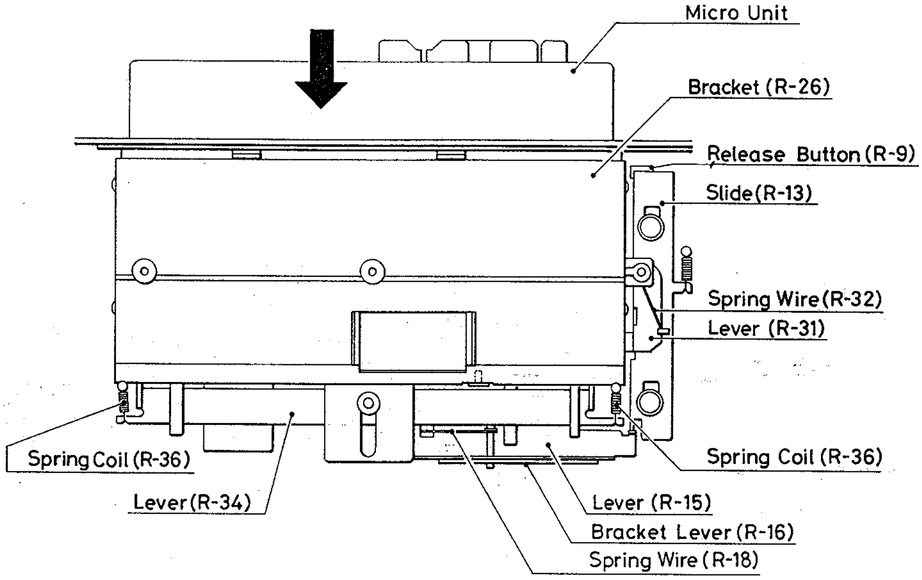


SOLDER SIDE



MOUNTING/RELEASING MECHANISM

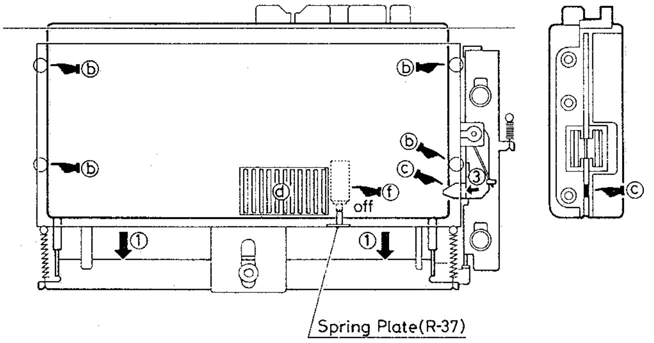
This set consists of the radio unit and micro unit. The micro unit is detachable. The radio unit and micro unit may be used independently, or the micro unit may be mounted on the radio unit to be used simultaneously. The mounting/releasing mechanism is explained below.

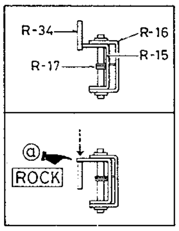


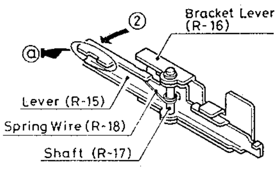
(1) Mounting

Insert the micro unit into the mounting part of the radio unit in the correct direction until it is locked as shown below. The mounting mechanism is explained below step by step.

a. When the micro unit is pushed in, the lever (R-34) slides in the direction of arrow 1 while stretching the right and left spring coils (R-36).







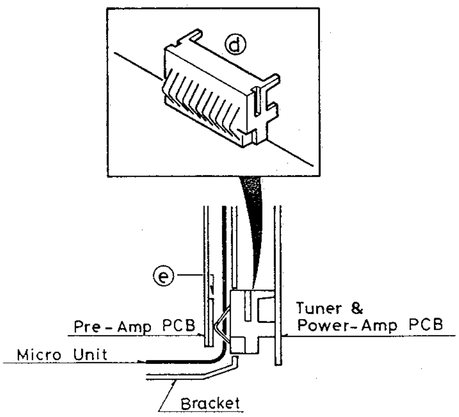
b. The lever (R-15) is held by bracket lever (R-16) and shaft (R-17), and is always pushed in the direction of arrow 2 by means of spring wire (R-18).

c. When the upper end of lever (R-34) is pushed down to part (a) of lever (R-15) the lever (R-34) is locked.

d. The lever (R-31) is held by the bracket (R-26), and is always pushed in the direction of arrow 3 by means of spring wire (R-32).

e. The four points marked (b) are the slide rollers of the micro unit. When the lever (R-34) is locked, the end of the lever (R-31) enters part (c) at the same time to be locked.

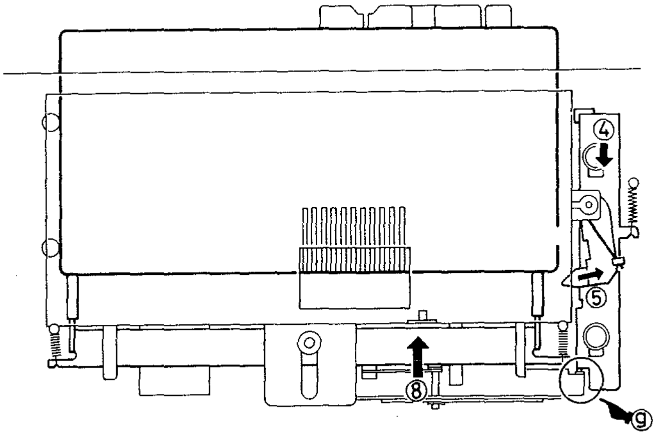
f. Electrically, the socket (d) contacts with the PCB (e), and the signal of the micro unit is transmitted to the radio unit, and, at the same time, the spring plate (R-37) pushes the switch (f) of the micro unit to cut the power of the micro unit, thereby switching over to the power source of the radio unit.

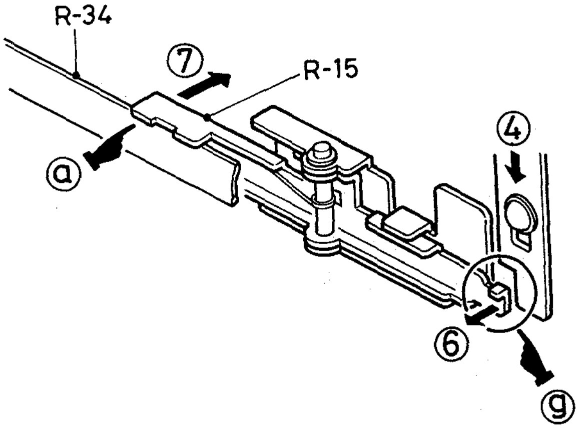


(2) Releasing

To separate the micro unit from the radio unit, press the release button (R-9). The releasing action takes the following steps.

a. When the release button (R-9) is depressed, the slide (R-13) secured to the release button (R-9) slides in the direction of arrow 4.
b. As the slide (R-31) is slid, the end part (c) of the lever (R-31) is moved in the direction of arrow 5, and the locking with the micro unit is released.
c. As the end part (g) of the slide (R-13) is slid, the lever (R-15) is pushed out in the direction of arrow 6.
d. The part (a) of the lever (R-15) moves in the direction of arrow 7, reverse to arror 6 direction, so that the locking is set free.
e. The unlocked lever (R-34) returns in the direction of arrow 8 by means of two spring coils (R-36) immdiately, so that the micro unit is pushed out.
f. Electrically, the operation is reverse to the case of mounting; the contact between the socket (d) and PCB (e) is cleared, and the switch (f) is changed to the power source of micro unit.



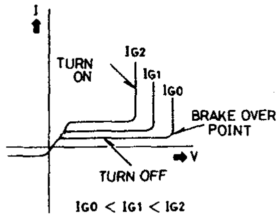


FULL SILENT STOP CIRCUIT

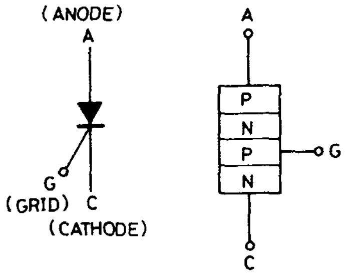
This set comprises a full silent stop circuit which, when the tape is wound up to its end, automatically cuts the power source to stop the motor rotation.

NOTE: When the autostop mechanism works, the mechanism button does not reset automatically; in such a case push the stop button to reset.

(1) Performance of SCR



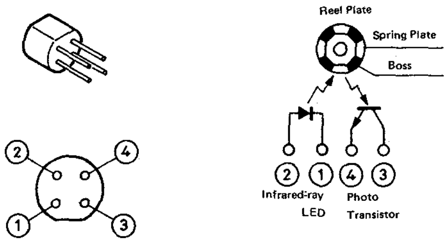
CHARACTERISTIC CURVE



SCR stands for silicon controlled rectifier, which is also called thyristor. The structure is PNP junction and the gate terminal is extended from the middle P-layer. When a positive voltage is applied to the anode and a negative voltage to the cathode, current hardly flows up to the breakover voltage poing (OFF state). Then, when a positive voltage is applied to the gate, the SCR starts to conduct, and current begins to flow (turn-on state). Now, if the gate current is cut, a perfect conducting state continues. The conducting state may be turned off by three methods.

(a) The current flowing from the anode to the cathode is decreased.
(b) A negative voltage is applied to the anode, and a positive voltage to the cathode.
(c) A reverse bias is applied between the gate and cathode.

(2) Action of photo reflector



A photo reflector is constituted by assembling GaAs infrared ray light emitting diode and silicon photo transistor into a seramic header.

The spring plate of the reel plate (feed side) shaft is reflecting part, and the boss is non-reflecting part. The infrared ray emitted from the LED is reflected by the shield plate, and enters the photo transistor to be detected.

(3) **Motor starting** (*Not after pause state)

a. When record/play bytton or FF/REW button is depressed, switch S705 to S704 is closed.

b. The positive potential being applied runs through electrolytic capacitor C702 or C701, and a voltage is applied to the gate of thyristor SCR701 (3P 5P), which becomes the trigger to turn on.

c. When SCR701 turns on, a current flows into the base of transistor Q703, which then turns on.

d. As Q703 turns on, a voltage is applied to the motor, which then starts up. At this time, a voltage is applied also to the micro unit (including the auto stop circuit).

e. When REW/FF button is pushed, the positive potential is applied to the base of transistor Q701 by way of diode D705, thereby turning on Q701. This is intended to increase the motor speed, and the negative power source for FF/REW in the motor PCB is set to the earth potential.

(4) **Tape running state**

a. As the motor rotates, the coaxial boss for reflection and spring plate mounted on the feed side reel plate (C12) are also put into rotation.

b. The rotating actions above are detected by photo reflector Q707, and only the AC portions of the waveform of detected small current are detected by capacitor C705, and are amplified by transistors Q706, Q705. Diodes D703, D704 are intended to supply positive potential without containing ripple.

c. While transistor Q705 is OFF, capacitor C703 is charged; while it is ON, C703 is discharged.

d. While action of (c) continues, that is, while the tape is running, bias is not applied to the base of transistor Q704, which maintains OFF state.

(5) **End of tape running**

a. As the tape ends, the rotation of reel plate stops, and signals of AC components are eliminated from C705. As a result, Q705 becomes OFF. Accordingly, charging of C703 continues, and a bias is applied to the base of Q704, which is then turned on.

b. As Q704 turns on, the gate of SCR701 is reversely biased, so that SCR701 turns off.

c. As SCR701 turns off, current no longer flows into the base of Q703, which is then turned off.

d. As a result of turning-off of Q703, no voltage is applied to the motor, and the motor finally stops rotating.

(6) **Stopping while motor is running**

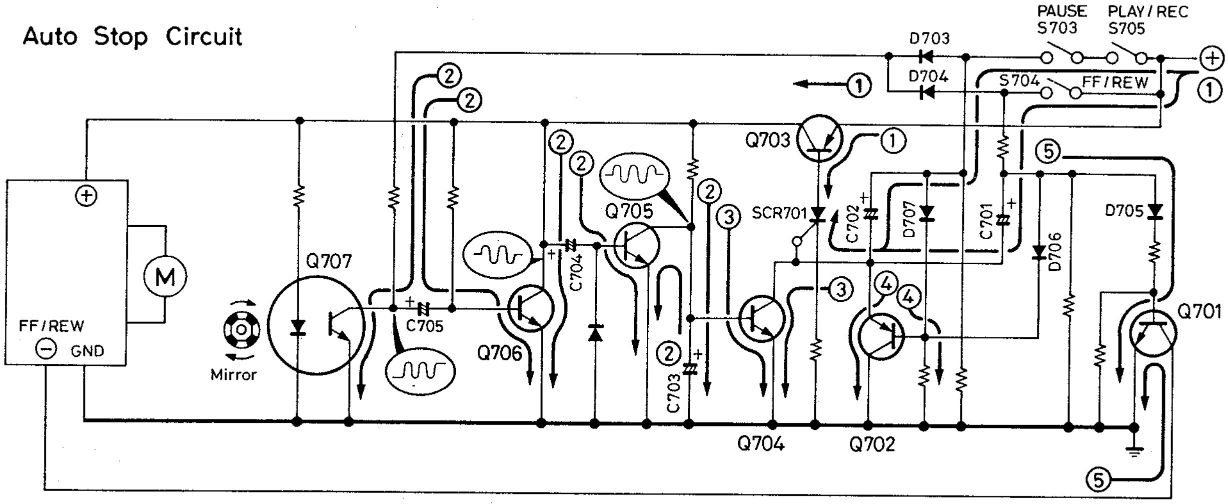
a. When stop button is pushed while the tape is running, switch S705 or S704 is mechanically opened.

b. Diode D707 or D706 has been applying a positive potential to the base of transistor Q702; however, as the switch is opened, the base pontential declines, so that Q702 turns on.

c. As Q702 turns on, the gate of SCR701 is reversely biased, and SCR701 turns off. At this time, turning-on of Q702 is a momentary action.

d. Thereafter, the motor stops rotating in the procedure of (c) and (d) in (5).

Auto Stop Circuit



(1) Motor starting
(2) Tape running
(3) End of tape
(4) Tape stop operation
(5) FF/REW operation

HANDLING OF CHIP PARTS (RESISTORS, CAPACITORS) AND SPECIAL PARTS

(1) What are chips?

Resistors and capacitors are roughly classified into the lead type and chip type, depending on whether lead wires are used or not. The chip type completely different from the conventional lead type, is a package directly mountable on the PCB.

(2) How to remove a chip

a. Remove solder from both ends of the chip completely by using braided wire. (See sketch.)

b. Fitting a soldering iron to both ends of the chip, turn over slightly with pincers as shown in the drawing, and remove the chip.

* Do not use the removed chip again.

(3) How to mount a chip

a. Mount a chip on the pattern, and solder it.

b. After soldering, let it stand to cool naturally.

(4) Cautions for mounting chips

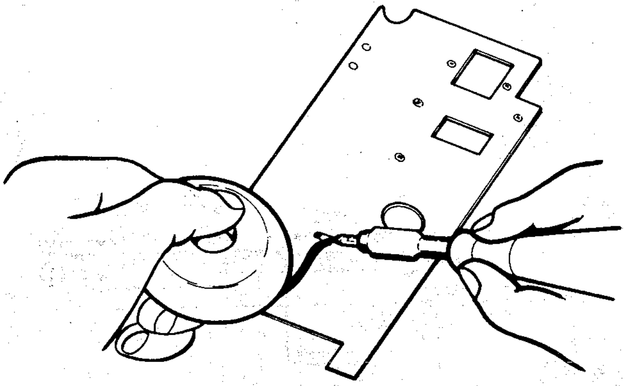
* Use a pencil type soldering iron (less than 40 W).

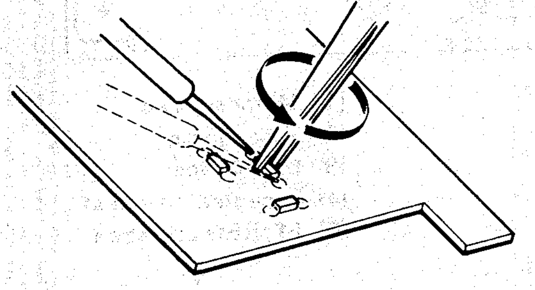
a. Apply soldering iron at 220 ± 10°C within 3 seconds.

b. Do not rub against the electrode.

c. A chip resistor has face and back; the black side is the face. Fit the back side (white side) to the PCB surface.

d. Chip capacitors (brown colored) are not identified by the face or back.





(5) Special cautions relating to chip tantalum capacitors

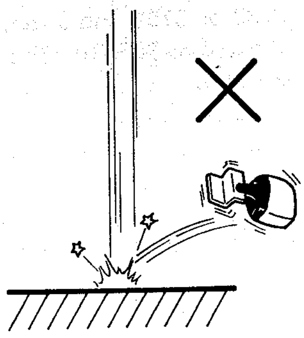
a. Be careful not to drop a tantalum capacitor, or apply a strong force to it.

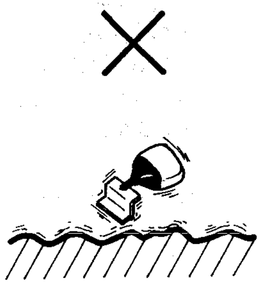
* Do not use the capacitor once dropped.

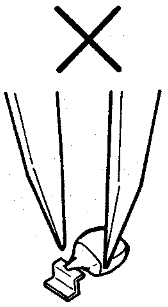
b. Do not handle directly with mentallic pointed tools such as pincers and alligator clips.

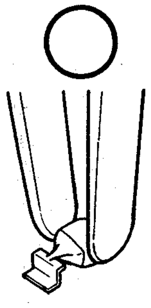
c. When soldering, spread cream solder on the pattern of PCB, place a chip tantalum capacitor on it in correct polarity, and apply heat with soldering iron.

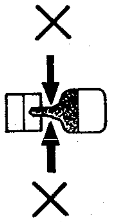
d. Do not fit the tip of soldering iron directly to the capacitor.











(6) Cautions for mounting special parts

a. When soldering variable resistors (VR801, VR901) of the micro unit, fit within a second or two at less than 250°C, without applying load to the terminals as far as possible.

b. To solder semivariable resistors (SVR801, SVR802, SVR902) of the micro unit, use silver solder.

* Use pencil type soldering iron (less than 40 W).

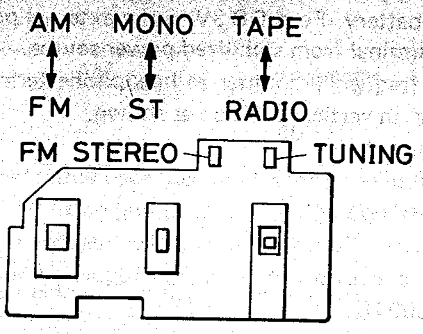
(7) Necessary tools

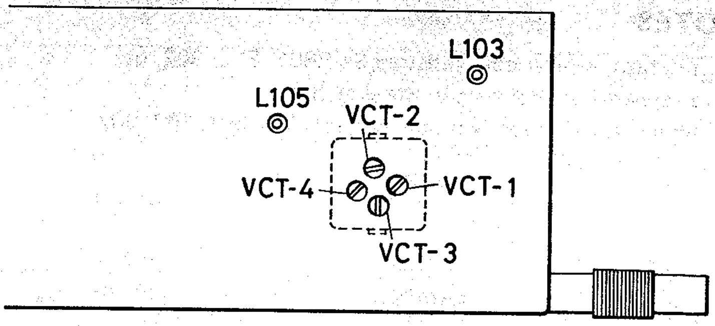
Pencil type soldering iron with thermostat

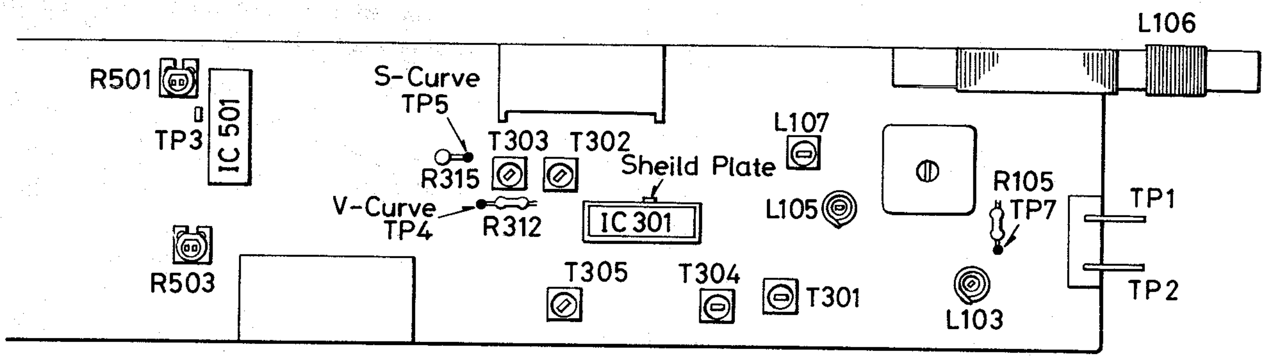
*Braided wire

*Braided wire is available from our Service Division.

PARTS LOCATION (RADIO UNIT)







ADJUSTMENT OF PREAMPLIFIER UNIT (MICRO UNIT)

(1) Output adjustment

a. Play back a test tape of 1 kHz, 5 dB (TMT6179, etc.), and turn SVR801 until the difference in output level between right and left channels of headphone output terminal becomes within ±1 dB.

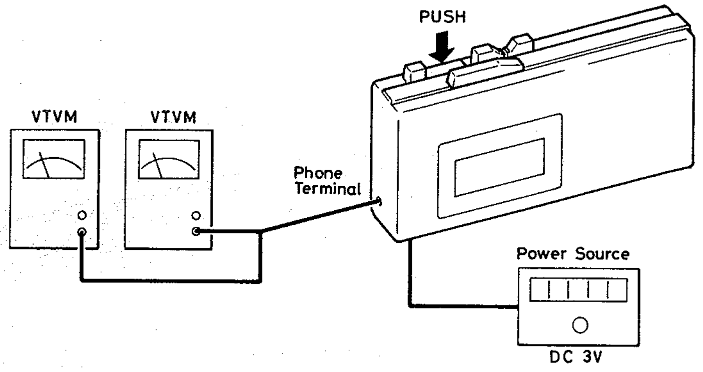
(2) Bias adjustment

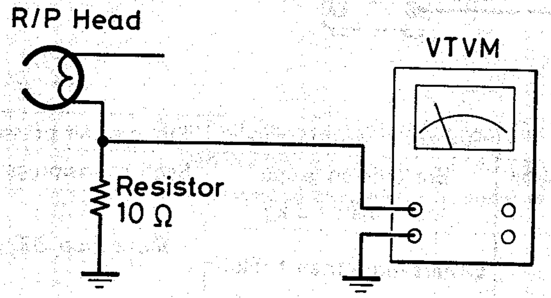
a. Connect a 10-ohm resistor in series to the earth side in both right and left channels of record/playback head.

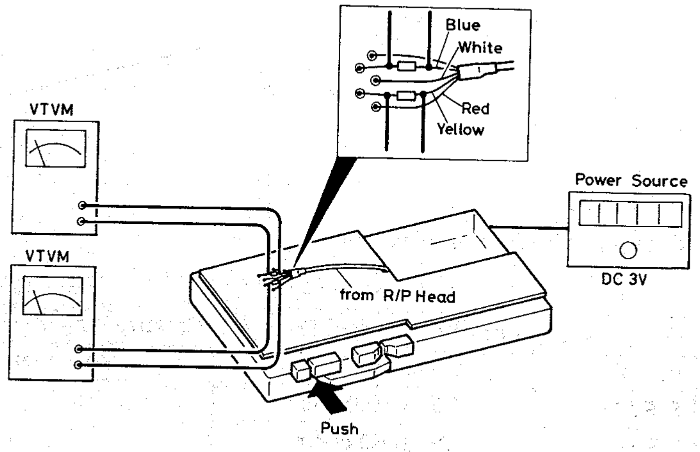
b. Set tape mode selector to METAL and tape speed to 2.4 cm, then put in record mode.

c. Turning on and off the beat cancel switch, set to the higher output (the voltage across the 10-ohm resistor) side.

d. Turn SVR802 and SVR902 until the output may be 10.5 mV ± 0.5 dB on both right and left channels.



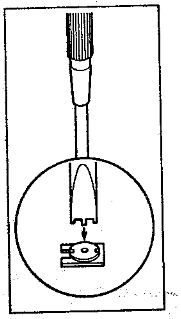




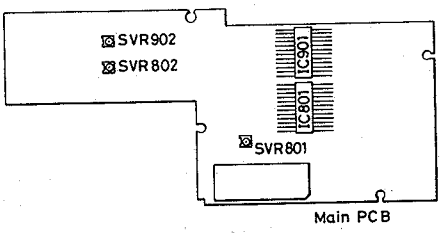
PARTS LOCATION (MICRO UNIT)

NOTES

- To turn semivariable resistors SVR801, 802, 902, use a screwdriver as shown in the sketch.
- When replacing semivariable resistors SVR801, 802, 902, use silver solder.



SCREW DRIVER



MECHANISM ADJUSTMENT

(1) Azimuth adjustment

a. Remove cover as shown.
b. Connect oscilloscope to headphone terminals.
c. Set tape speed selector to 2.4 cm.
d. Load with standard test tape 3 kHz (W111, etc.).
e. Press play button, and turn azimuth adjusting screw with a screwdrive until the waveform on the scilloscope reaches the maximum without distortion.
f. Adjust in both right and left channels.

(2) Tape speed adjustment

Preparation

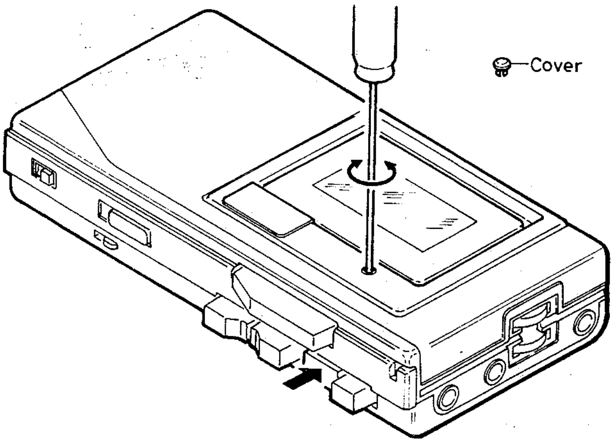
a. Remove battery. Feed DC 3V to the external power source terminal from stabilized power source.
b. Connect frequency counter to headphone terminal, and adjust in vertical position as shown.

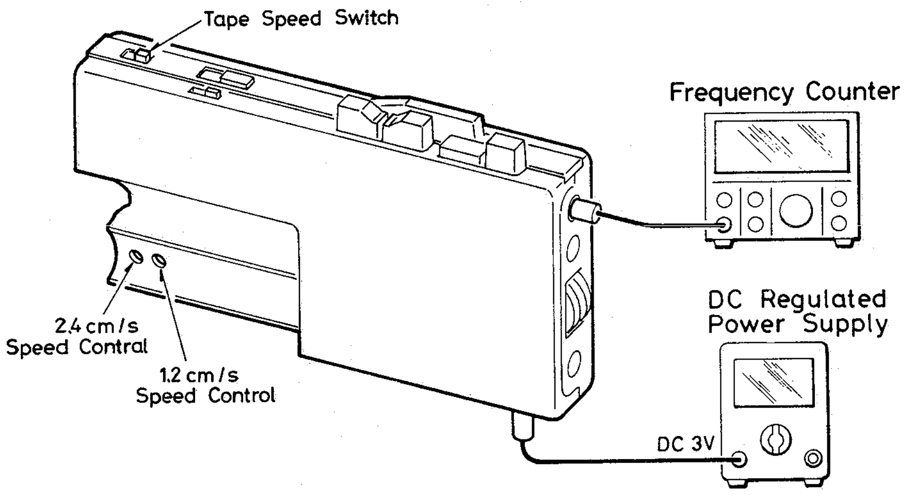
2.4 cm/sec speed

a. Set speed selector to 2.4 cm, and load with standard tape 3 kHx (W111, etc.) at its ending part.
b. Play it back. Turn the semivariable resistor for 2.4 cm with a screwdriver until the frequency counter reads 3,000 Hz.

1.2 cm/sec speed

a. Set speed selector to 1.2 cm side, and load with standard tape 3 kHz (S9, 300, etc.) at its ending parts.
b. Play it back. Turn the semivariable resistor for 1.2 cm with a screwdriver until the frequency counter reads 3,000 Hz.





(3) Measurement of torques

Item	Takeup torque	Tape tension	Button operating effort	Pinch roller pressure
Gauge used	Cassette type torque meter	Cassette type drive power meter	Bar tension gauge	Sector tension gauge
PLAY	4.0 to 10.0 gr-cm	More than 63 gr	More than 1.5 kg	More than 200 gr
F·FWD	4.0 to 10.0 gr-cm		Others More than 1.0 kg	
REW	25 to 60 gr-cm			

ADJUSTMENT OF TUNER UNIT (RADIO UNIT)

Adjust at the supply voltage of 6 volts DC. Speaker impedance should be 3 ohms.

AM		Frequency	Adjusting point	FM		Frequency		Adjusting point
IF		460 kHz	T304, T305	IF		10.7 MHz	V-curve	T301·T302
							S-curve	T303
Coverage	LOW	505 kHz	L107	Coverage	LOW	87.35 MHz ± 150 kHz		L105
	HIGH	1,650 kHz	VCT-4		HIGH	108.9 MHz ± 300 kHz		VCT-2
Tracking frequency	LOW	600 kHz	L106	Tracking frequency	LOW	90MHz		L103
	HIGH	1,400 kHz	VCT-3		HIGH	106MHz		VCT-1

[Cautions for FM adjustment]

* FM input points

IF hot side H: TP7 (R105)
IF earth side E: TP2

FM output points

IF hot side H: V-curve, TP4 (R312)
S-curve, TP5 (R315)
IF earth side E: shield plate

* FM antenna dummy is 75-ohm unbalanced type.

* After placing into the case, adjust the 88 and 108 MHz points.

* For IF adjustment of AM and FM, match with the frequency of ceramic filter.

- **Adjustment of FM multiplex**

Carrier signal modulation freqency, 1000 Hz ±22.5 kHz dev.
Pilot signal (19 kHz) ±7.5 kHz dev.

* To be done after FM tuner adjustment.

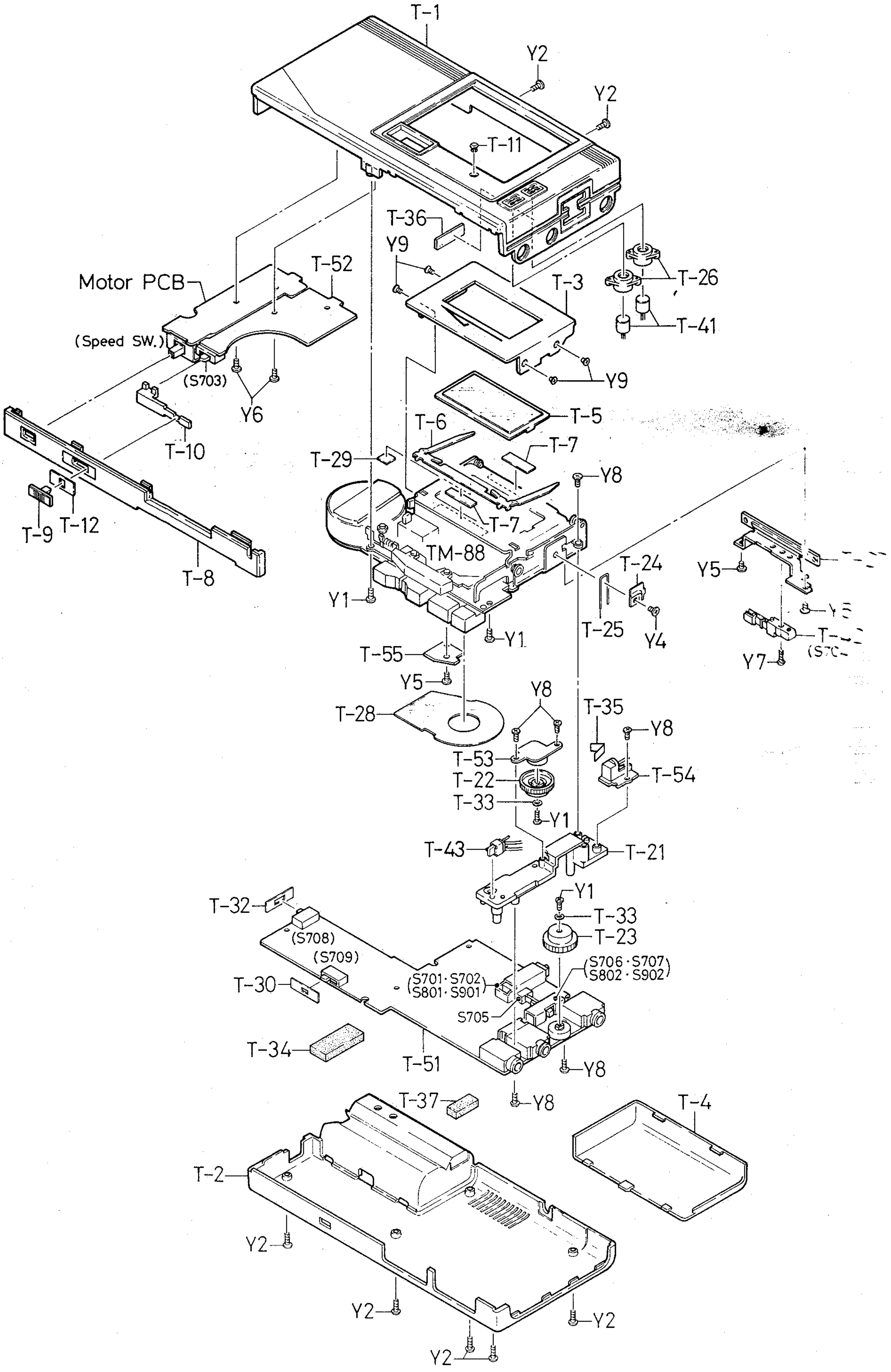
Adjustment item	Tuning freq.	Instrument connection		SG freq.	Adjusting position	St'd value	Method of adjustment
		Input side	Output side				
VCO (19KHz)	90 MHz	Connect hot side of FM-SG to TP1, and earth side to TP2.	Connect hot side of freq. counter to TP3, and to shield plate.	90 MHz	SVR R503	19.00 kHz ±100Hz	1. In FM stereo state, tune by setting FM-SG output to 60dB. 2. * Adjust without modulation.
Separation	90 MHz		Connect DVTVM and oscilloscope to ext. SP terminals; adjust both channels to st'd output by turning volume control.	90 MHz	SVR R501	Good balance of channels, plus: 1000 Hz ... more than 30dB	1. In FM stereo state, tune by setting FM-SG to 60 dB. 2. Set tone control to MIN, balance to middle, volume to st'd output. 3. * By changing channel on stereo modulator, adjust the leakage current of the opposite channel to minimum.

* Without modulation" means to turn off the main & sub signal and pilot signal switches.

* When changing the channels, switch over the connections of the external speaker terminals.

* In this adjustment, keep the band selector at FM and mode selector at STEREO position.

EXPLODED VIEW (MICRO UNIT)



MICRO UNIT

Key No.	Part No.	Description	Q'ty
CABINET & CHASSIS			
T1	141-0-111T-48222	Cabinet Ass'y	1
T2	141-0-126T-36104	Back Lid Ass'y	1
T3	141-2-124T-31301	Top Lid	1
T4	141-2-128T-17240	Battery Lid	1
T5	141-2-131T-30600	Clear Window, Cassette Lid	1
T6	141-2-853T-55600	Spring Plate	1
T7	141-2-250T-00401	Double Face	1
T8	141-2-153T-70200	Escutcheon	1
T9	141-2-164T-28800	Slide Knob, Pause	1
T10	141-2-210T-30700	Bracket, Pause	1
T11	141-2-135T-76000	Cover, Azimuth	1
T12	141-2-352T-53300	Spacer	1
T21	141-0-311T-38300	Chassis Ass'y	1
T22	141-2-163T-79900	Rotary Knob, Volume R	1
T23	141-2-163T-80000	Rotary Knob, Volume L	1
T24	141-2-310T-57300	Bracket, R/P	1
T25	141-2-852T-69700	Spring Wire, R/P	1
T26	141-2-385T-05000	Bracket, Mic	2
T27	141-2-310T-57400	Bracket	1
T28	141-2-246T-93500	Sheet	1
T29	141-2-246T-93600	Sheet	1
T30	141-2-135T-79100	Cover	1
T31	141-2-322T-70400	Shield Plate	3
T32	141-2-135T-79800	Cover	1
T33	141-2-453T-61000	Washer 1.8x3.5x0.3	2
T34	141-2-447T-40501	Cushion 8x20x2t	6
T35	141-2-352T-53800	Spacer	1
T36	141-2-447T-07300	Cushion	1
T37	141-2-447T-49302	Cushion 5x15x2t	1
T38	141-2-246T-97400	Sheet	1
T39	141-2-447T-00800	Cushion 5x15	1
HARDWARE			
Y1	BS1NS1R7+4+CY	SP Pan Hd. Screw 1.7x4	2
Y2	BS1NS1R7+5+C1	SP Pan Hd. Screw 1.7x5	7
Y4	BS3NS1R4R4+CP	SP Pan Hd. Screw 1.4x1.4	1
Y5	BS3NS1R4+2+CP	SP Pan Hd. Screw 1.4x2	3
Y6	BS3NS1R7+3+CP	SP Pan Hd. Screw 1.7x3	2
Y7	BS3NS1R7+5+CP	SP Pan Hd. Screw 1.7x5	1
Y8	BS3BS1R7+4+CP	SP Pan Hd. Tapping Screw 1.7x4	6
Y9	BS1SS1R4R5+CI	SP Flat Hd. Screw 1.4x1.5	4
ACCESSORY			
	4-241T-15402	Cassette Tape	1
	4-241T-16401	Cassette Tape	3
ELECTRICAL PARTS			
T41	4-153T-12771	Microphone	2
T42	4-238T-32800	Switch (S704)	1
T43	4-207T-01201	LED Ass'y	1
C714		Ceramic Cap. 100pF ±10% 50V	1
C715	4-223T-11200	Capacitor 220μF 6.3V	1
	141-2-382T-19200	Terminal 3P	1
MICRO UNIT AMP PCB ASSEMBLY			
T51	140-4-233T-98271	P.C Board Ass'y, Micro Unit Amp	1
	141-2-382T-19000	Terminal, Connecter	1
	4-240T-07700	Socket, Headphone	1
	4-235T-68100	Socket, Right Mic	1
	4-240T-07800	Socket, Left Mic	1
S706,707 802,902	4-238T-32500	Slide Switch	1
S701,702 801,901	4-238T-32700	Swttch	1
S708,709	4-231T-88371	Switch	2
S705	4-238T-20600	Switch	1
VR801	4-222T-73600	Variable Resistor 10K-D	1
L701	4-258T-32400	OSC Coil	1
L801,901	4-252T-12200	Choke Coil	2

Key No.	Part No.	Description	Q'ty
MICRO UNIT AMP PCB ASSEMBLY			
SVR801	4-222T-93400	Semifixed Variable Resistor	1
SVR802 902	4-222T-93472	Semifixed Variable Resistor	2
IC801,901		IC CX807	2
Q708		Transistor 2SD1012	1
	CAPACITORS		
C707	4-223T-11200	Capacitor 220μF 6.3V	1
C706	4-223T-12000	Capacitor 470μF 6.3V	1
C814,914 817,917 682,921		Electrolytic 47μF 6.3V	6
C824,924		Electrolytic 47μF 6.3V	2
C818,918		Tantal 0.22μF 25V ±20%	2
C826		Tantal 10μF 6.3V ±20%	1
C806,906 811,911 820,920		Chip Tantal 22μF 6.3V ±20%	6
C816,916		Chip Tantal 4.7μF 10V ±20%	2
C804,908 808,908		Chip Tantal 1.0μF 16V ±20%	4
C807,908		Chip Tantal 0.33μF 35V ±20%	2
C710		Chip Tantal 0.22μF 35V ±20%	1
C825,925		BC CON 0.001μF 25V ±10%	2
C809,909		BC CON 0.001μF 25V ±5%	2
C711		Mylar 680pF 50V ±5%	1
C712		Ceramic 180pF 50V ±5%	1
C823,923		Chip 220pF ±10% 50V	2
C803,903 709		Chip 0.001μF ±20% 50V	3
C822,922		Chip 0.0022μF ±20% 50V	2
C813,913		Chip 0.0033μF ±20% 50V	2
C819,919		Chip 0.001μF ±20% 50V	2
C708		Chip 0.01μF ±20% 50V	1
C810,910		Chip 0.0082μF ±10% 50V	2
C802,902		Chip 0.022μF ±20% 50V	2
C805,905 801,901		Chip 0.033μF ±20% 50V	4
C827,927		Chip 0.1μF +80−20% 25V	2
C713		Chip 100pF ±10% 50V	1
C815,915		Chip 0.047μF ±20% 25V	2
	RESISTORS		
R804,904		Chip 1M ohm ±10% 1/8W	2
R720		Chip 6.8K ohm±10% 1/8W	1
R910		Chip 2.2K ohm±10% 1/8W	1
R807,907		Chip 4.7K ohm±10% 1/8W	2
R811,911		Chip 2.2K ohm±10% 1/8W	2
R803,903		Chip 3.3K ohm±10% 1/8W	2
R810		Chip 1.5K ohm±10% 1/8W	1
R805,905		Chip 680 ohm ±10% 1/8W	2
R717		Chip 68 ohm ±10% 1/8W	1
R714,719		Chip 100 ohm ±10% 1/8W	2
R802,902		Chip 68 ohm ±10% 1/8W	2
R715		Chip 390 ohm ±10% 1/8W	1
R906		Chip 2.7K ohm±10% 1/8W	1
R718		Chip 39 ohm ±10% 1/8W	1
R814,914		Chip 2.2K ohm±10% 1/8W	2
R806		Chip 1.8K ohm±10% 1/8W	1
R716		Chip 330 ohm ±10% 1/8W	1
R725		Carbon 2.2 ohm ±10% 1/8W	1
AUTO STOP PCB ASSEMBLY			
T52	140-4-233T-98371	P.C Board Ass'y, Auto Stop	1
S703	4-231T-88371	Switch	1
SCT701		Sayristor 03P05M	1
Q703		Transistor 2SB598	1
Q701		Transistor 2SC945	1
Q711		Transistor 2SB632	1
Q702		Chip Transistor 2SA812	1
Q704,705 706		Chip Transistor 2SC1623	3
D703,704 705,706 707,709		Diode DS442 X	6
D701		Zener Diode GZA3.6Z	1

MICRO UNIT

Key No.	Part No.	Description	Q'ty
AUTO STOP PCB ASSEMBLY			
	CAPACITORS		
C701,702 704,705		Electrolytic Cap. 22µF 6.3V	4
C703	4-223T-11200	Capacitor 220µF 0.3V	1
	RESISTORS		
R712		Chip 390K ohm 10% 1/8W	1
R704,707		Chip 120K ohm 10% 1/8W	2
R710		Chip 56K ohm 10% 1/8W	1
R713		Chip 47K ohm 10% 1/8W	1
R702		Chip 2.2K ohm 10% 1/8W	1
R708,711		Chip 3.3K ohm 10% 1/8W	2
R709		Chip 330 ohm 10% 1/8W	1
R705,706		Chip 270 ohm 10% 1/8W	2
R703		Chip 10K ohm 10% 1/8W	1
R724		Chip 220 ohm 10% 1/8W	1

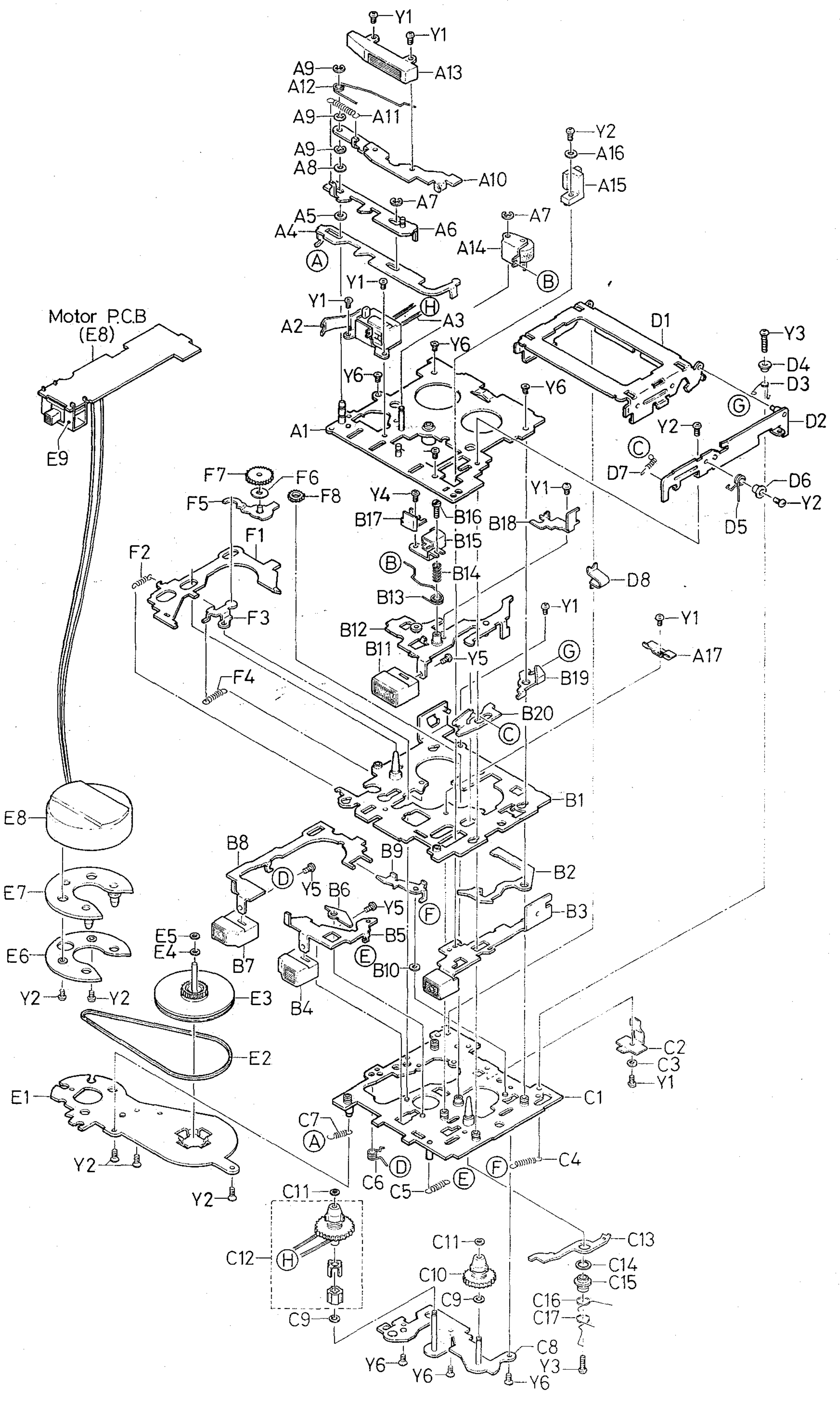
Key No.	Part No.	Description	Q'ty
VOLUME PCB ASSEMBLY			
T53	141-4-233T-98500	P.C Board Ass'y, Volume	1
VR901	4-222T-73671	Variable Resistor	1
EXT POWER PCB ASSEMBLY			
T54	141-4-233T-98600	P.C Board Ass'y, Ext Power	1
	4-235T-93300	Socket	1
SENSER PCB ASSEMBLY			
T55	141-4-250T-11000	P.C Board Ass'y, Senser	1
Q707		Photo Transistor NJL5141EA	1

MECHANISM

Key No.	Part No.	Description	Q'ty
MECHANISM			
A1	141-0-311T-34601	Chassis Ass'y	1
A2	141-0-811T-09300	Counter Ass'y	1
A3	141-2-564T-25200	Square Belt, Counter	1
A4	141-2-731T-82001	Slide	1
A5	141-2-453T-30201	Washer 2.6x4.7x0.25	2
A6	141-0-731T-81700	Slide Ass'y	1
A7	141-2-457T-23700	Special Washer	2
A8	141-2-453T-30200	Washer 2.6x4.7x0.13 Nylon	1
A9	141-2-457T-23800	Special Washer	3
A10	141-2-742T-51401	Lever	1
A11	141-2-855T-56800	Spring Coil	1
A12	141-2-852T-69500	Spring Wire	1
A13	141-2-161T-78700	Push Button	1
A14	141-0-545T-07400	Lever Ass'y, Pinch Roller	1
A15	4-242T-27600	E Head	1
A16	141-2-453T-61000	Washer 1.8x3.5x0.3	1
A17	141-2-853T-67300	Spring Plate	1
B1	141-0-311T-34701	Chassis Ass'y	1
B2	141-2-742T-51000	Lever, Rec	1
B3	141-0-161T-92200	Push Button Ass'y, Rec	1
B4	141-2-161T-92100	Push Button, Rew	1
B5	141-2-731T-82201	Slide, Rew	1
B6	141-2-742T-71100	Lever, Review	1
B7	141-2-161T-92000	Push Button, FWD	1
B8	141-2-731T-91300	Slide, FWD	1
B9	141-2-742T-51101	Lever	1
B10	141-2-453T-30100	Washer 2.1x4x0.13 Nylon	1
B11	141-2-161T-91900	Push Button, Play	1
B12	141-2-731T-91100	Slide Ass'y	1
B13	141-2-852T-69600	Spring Wire	1
B14	141-2-855T-84300	Spring Coil	1
B15	4-242T-26900	R/P Head	1
B16	141-2-421T-30400	Special Screw	1
B17	141-2-310T-56600	Bracket	1
B18	141-2-821T-12600	Tape Guide	1
B19	141-2-742T-51300	Lever	1
B20	141-2-731T-81900	Slide Eject	1
C1	141-0-311T-34801	Chassis Ass'y	1
C2	141-2-853T-67400	Spring Plate	1
C3	141-2-453T-61000	Washer 1.8x3.5x0.3	1
C4	141-2-855T-17800	Spring Coil	1
C5	141-2-855T-82300	Spring Coil	1
C6	141-2-852T-69400	Spring Coil	1
C7	141-2-855T-56500	Spring Coil	1
C8	141-0-310T-56700	Bracket Ass'y	1

Key No.	Part No.	Description	Q'ty
C9	141-2-453T-30101	Washer 2.1x4x0.25 Nylon	2
C10	141-0-531T-12902	Reel Plate Ass'y, Tack-up	1
C11	141-2-453T-33100	Washer	2
C12	141-0-531T-12900	Reel Plate Ass'y, Supply	1
C13	141-2-742T-66100	Lever	1
C14	141-2-453T-30500	Washer 4.1x6.5x0.13	1
C15	141-2-461T-40700 141-2-461T-38600	) or Pipe	1
C16	141-2-852T-69200	Spring Wire	1
C17	141-2-852T-69300	Spring Wire	1
D1	141-0-124T-28200	Top Lid Ass'y	1
D2	141-0-310T-39100	Bracket Ass'y	1
D3	141-2-852T-63500	Spring Wire	1
D4	141-2-461T-38100	Pipe	1
D5	141-2-852T-66900	Spring Wire	1
D6	141-2-461T-39700	Pipe	1
D7	141-2-855T-56700	Spring Coil	1
D8	141-2-853T-67500	Spring Plate	1
E1	141-0-310T-39201	Bracket Ass'y	1
E2	141-2-564T-25300	Square Belt Main	1
E3	141-0-581T-20600	Gear Ass'y	1
E4	141-2-453T-30001	Washer 1.7x3.2x0.25	1
E6	141-2-378T-11900	Bracket, Motor	1
E7	141-2-445T-26700	Rubber Cushion	1
E8	4-527T-16900 4-527T-16971	) or Motor W/PCB	1
E9	4-238T-32600	Slide Switch	1
F1	141-2-731T-91200	Slide	1
F2	141-2-855T-56400	Spring Coil	1
F3	141-2-742T-51201	Lever	1
F4	141-2-855T-78400	Spring Coil	1
F5	141-0-742T-50800	Lever Ass'y	1
F6	141-2-453T-31801	Washer	1
F7	141-2-581T-17800	Gear	1
F8	141-2-581T-17900	Gear	1
HARDWARES			
Y1	BS3NSIR4+2+CP	SP Pan Hd. Screw 1.4x2	8
Y2	BS3NSIR4+4+CP	SP Pan Hd. Screw 1.4x4	8
Y3	BS3NSIR4+8+CP	SP Pan Hd. Screw 1.4x8	2
Y4	BS1NSIR7+3+CP	SP Pan Hd. Screw 1.7x3	1
Y5	BS1BSIR4+4+CP	SP Pan Hd. Tapping Screw 1.4x4	3
Y6	BS1SSIR4R8+NI	SP Flat Hd. Screw 1.4x1.8	7

EXPLODED VIEW (MECHANISM)



RADIO UNIT

PACKING

Key No.	Part No.	Description	Q'ty
	141-6-133T-29302	Individual Carton	1
	141-6-144T-75400	Foam Plastic Case, Bottom	1
	141-6-144T-75500	Foam Plastic Case, Top	1
	141-6-231T-40305	Inner Polye Cover, Radio Unit	1
	141-6-231T-10205	Inner Polye Cover, Micro Unit	1
	141-6-231T-11000	Inner Polye Cover, Case	1
	141-6-231T-11200	Inner Polye Cover, Band	1
	141-6-231T-15300	Inner Polye Cover, Inst. M.	1
	141-6-317T-42200	Pad, Foam Plastic Case	1

ACCESSORY

Key No.	Part No.	Description	Q'ty
	141-6-410T-69500	Instruction Manual	1
	4-152T-04100	Headphone	1
	141-2-181T-13001	Case	1
	141-2-176T-06500	Band	1

CABINET & CHASSIS

Key No.	Part No.	Description	Q'ty
R1	141-0-111T-48102	Cabinet Ass'y	1
R2	141-2-126T-35903	Back Lid	1
R3	141-0-128T-17100	Battery Lid Ass'y	1
R4	141-0-171T-15304	Handle Ass'y	1
R5	141-2-271T-18200	Bracket, Handle	2
R6	141-2-163T-79600	Rotary Knob, Tuning	1
R7	141-2-163T-79700	Rotary Knob, Volume	1
R8	141-2-163T-79800	Rotary Knob, Tone/Balance	2
R9	141-2-164T-28700	Slide Knob	1
R10	141-2-352T-52300	Spacer	1
R11	141-2-124T-31501	Top Lid	1
R12	123-2-310R-25700	Bracket	2
R13	141-2-731T-92000	Slide	1
R14	141-2-855T-78700	Spring Coil	1
R15	141-2-742T-66900	Lever	1
R16	141-2-747T-23100	Bracket, Lever	1
R17	141-2-754T-04700	Shaft	1
R18	141-2-852T-70300	Spring Wire	1
R19	141-0-310T-67100	Bracket Ass'y, Tuner Shaft	1
R20	141-0-566T-11400	Tuning Shaft Ass'y	1
R21	141-2-210T-30800	Bracket, Drum	1
R22	141-2-538T-13100	Drum	1
R23	123-2-481R-10600	Spring Coil	1
R24	141-2-511T-21300	Pointer	1
R25	141-2-340T-03000	Rope	1
R26	141-0-210T-30900	Bracket Ass'y	1
R27	141-2-224T-12000	Bracket Lid	1
R28	141-2-754T-04500	Shaft	1
R29	141-2-855T-61500	Spring Coil, Top Lid	2
R30	141-2-315T-24000	Reinforcement	1
R31	141-2-742T-66800	Lever	1
R32	141-2-852T-69800	Spring Wire	1
R33	141-2-421T-20900	Special Screw	1
R34	141-0-742T-67000	Lever Ass'y	1
R35	141-2-462T-69700	Boss	1
R36	141-2-855T-79000	Spring Coil	2
R37	141-0-853T-72800	Spring Plate Ass'y	1
R38	141-2-447T-12400	Cushion 1.5x20	2
R39	141-2-567T-02000	Pulley Shaft	3
R40	141-2-661T-32900	Pulley	2
R41	141-2-365T-54900	Bracket, Switch	1
R42	141-2-361T-19000	Bracket, VR	1
R43	141-2-331T-04400	Holder, Battery	1
R44	141-2-367T-35401	Bracket, Socket	1
R45	141-2-363T-13200	Bracket, Capacitor	1
R46	141-2-164T-28600	Slide Knob, Band, Radio/ Tape etc.	4
R47	141-2-352T-52200	Spacer	4
R48	141-2-336T-18701	Terminal, Battery (–)	1
R49	141-2-336T-08400	Terminal, Battery (+)	1

CABINET & CHASSIS

Key No.	Part No.	Description	Q'ty
R50	141-2-337T-02200	Ribon, Battery Take-up	1
R51	141-2-457T-23000	Special Washer 2mm	2
R52	141-2-453T-30102	Washer 2.1x4x0.5t	2
R53	141-2-453T-61000	Washer 2.1x4x0.5t	2
R54	141-2-453T-01400	Washer 3x6x0.5t	1
R55	141-2-322T-70300	Shield Plate	1
	141-2-246T-97200	Sheet	1
	141-2-447T-03401	Cushion 10x15	1
	141-2-447T-00800	Cushion 5x15	5
	141-2-447T-00801	Cushion 5x15 (White)	2
	141-2-447T-42400	Cushion 10x40x3t, Bracket	2
	141-2-447T-46800	Cushion 10x20x3t, PCB	4
	141-2-447T-00301	Cushion 8x8, Cabinet	2
	141-2-447T-00201	Cushion 5ϕ, Cabinet	2
	141-2-447T-03401'	Cushion 10x15, Bracket	1
	141-2-447T-71100	Cushion 10x7x3t, Bracket SP	1

HARDWARE

Key No.	Part No.	Description	Q'ty
Y1		Pan Hd. Screw 2x4	1
Y2		Pan Hd. Screw 3x6	1
Y3		Pan Hd. Tapping Screw 2.3x8	12
Y4		Pan Hd. Tapping Screw 3x6	2
Y5		Pan Hd. Tapping Screw 3x8	2
Y6		Pan Hd. Tapping Screw 3x10	5
Y7		Pan Hd. Tapping Screw 3x12	1
Y8		Pan Hd. Tapping Screw 3x25	4
Y9		Pan Hd. Tapping Screw w/Washer 3x8	4
Y11	BS3NS1R7+5+CP	SP Pan Hd. Screw 1.7x5	2
Y12	BS1BS1R7+6+CP	SP Pan Hd. Tapping Screw 1.7x6	3
Y13	BS3BS1R7+4+CP	SP Pan Hd. Tapping Screw 1.7x4	1
Y15		Hexagon Nut 7	1

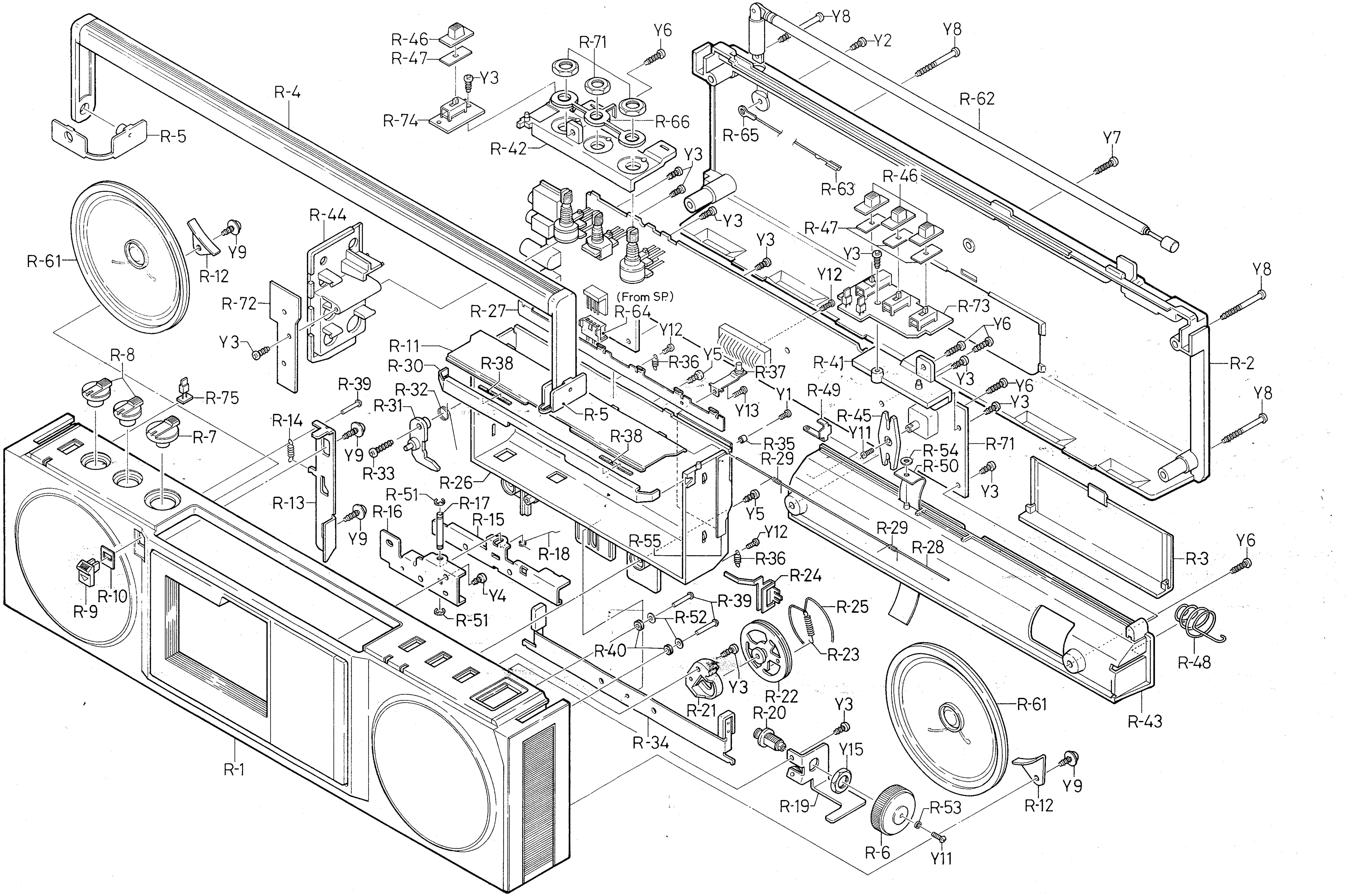
ELECTRICAL PARTS

Key No.	Part No.	Description	Q'ty
R61	4-151T-37900	Speaker 77mm 4 ohm	2
R62	4-244T-05400	Rod Antenna	1
R63	4-240T-18200	Socket, FM ANT	1
R64	4-240T-14900	Socket, 4P, Speaker	1
R65	123-2-472R-00400	Lug, FM ANT	1
R66	141-2-472T-10800	Lug, VR	1
	141-2-184T-13000	Elect Tape 30mm, Cab ~ Chassis	1

MAIN PCB ASS'Y

Key No.	Part No.	Description	Q'ty
R71	141-4-233T-96772	P.C Board Ass'y, Main	1
VCT VC	4-224T-19800	Variable Capacitor	1
R863,963 861,961	4-222T-93100	Variable Resistor	2
R862	4-222T-93200	Variable Resistor	1
	4-240T-07300	Socket, RCA	2
	4-240T-07400	Socket, Headphone	1
	4-240T-07500	Socket, 11P	1
	4-235T-54200	Socket, EXT-SP.	1
L106	4-257T-43700	ANT Coil	1
R501	4-222T-55472	Variable Resistor 1K	1
R503	4-222T-55474	Variable Resistor 10K	1
L105	4-265T-53700	VHF Coil	1
L104	4-265R-11200	VHF Coil	1
L103	4-265T-56400	VHF Coil	1
	4-236T-19571	Plug, 4P Width	1
	4-236T-19577	Plug, 10P Width	2
	4-236T-19900	Plug, 4P Length	1
T301	4-256T-17900	IFT FM 1st	1
T302	4-256T-18000	IFT FM 2nd	1
T303	4-256T-18100	IFT FM 3rd	1
L107	4-258T-31200	OSC Coil	1
T304	4-256T-24800	IFT	1
CF301 302	4-256T-85200	IF Filter	2
T305	4-256T-24900	IFT	1
L108	4-265R-00300	VHF Coil	1
L101,102	4-265R-00400	VHF Coil	2
L751	4-252T-12300	Choke Coil	1
CF303	4-256T-85171	IF Filter	1
	141-2-322T-49800	Shield Plate	1

EXPLODED VIEW (RADIO UNIT)



RADIO UNIT

Key No.	Part No.	Description	Q'ty
MAIN PCB ASSEMBLY			
TP3	4-237T-09000	Terminal Board	1
	4-236T-13471	Plug, 2P	1
B101	123-2-471R-10400	Core	1
Q301		Transistor 2SC930	1
Q103		Transistor 2SC930	1
Q302,303 751,752 853,953		Transistor 2SC536	6
Q851,852 951,952		Transistor 2SC536	4
Q753		Transistor 2SA608	1
Q101		Transistor 2SC930	1
Q754		Transistor 2SD400	1
Q102		Transistor FET 2SK212	1
IC301		IC MPC1018C E	1
IC501		IC LA3361	1
IC751		IC LA4190	1
D104,752		Varystor VD1221M	2
D103		Varactor Diode SD115	1
D301,302 307,304 303,308 757		Diode 1N60 FM	7
D101,102 306,325 753		Diode DS442 X	5
D755		Zener Diode GZA3.6Y	1
D756		Zener Diode GZA3.0Y	1
D751		Zener Diode GZA5.6L	1
	RESISTORS		
R755		Carbon 8.2 ohm ±10% ¼W	1
R751		Carbon 15 ohm ±10% ¼W	1
R108		Carbon 27 ohm ±10% ¼W	1
R864,964		Carbon 68 ohm ±10% ¼W	2
R865,965		Carbon 100 ohm ±10% ¼W	2
R757		Carbon 220 ohm ±10% ¼W	1
R106,859 959		Carbon 1K ohm ±10% ¼W	3
R109		Carbon 1.8K ohm ±10% ¼W	1
R107		Carbon 15K ohm ±10% ¼W	1
R753		Carbon 47K ohm ±10% ¼W	1
R754		Carbon 100K ohm ±10% ¼W	1
R758		Carbon 220 ohm ±10% ¼W	1
R852,952		Carbon 82K ohm ±10% ¼W	2
R111		Carbon 1.5K ohm ±10% ¼W	1
R105		Carbon 220 ohm ±10% ¼W	1
R110,101		Carbon 1K ohm ±10% ¼W	2
R103		Carbon 10K ohm ±10% ¼W	1
R320,502		Carbon 6.8K ohm ±5% 1/6W	2
R327		Carbon 10K ohm ±5% 1/6W	1
R318		Carbon 12K ohm ±5% 1/6W	1
R302		Carbon 15K ohm ±5% 1/6W	1
R752		Carbon 18K ohm ±5% 1/6W	1
R860,960 851,951		Carbon 22K ohm ±5% 1/6W	4
R319		Carbon 47K ohm ±5% 1/6W	1
R113,114 760		Carbon 100K ohm ±5% 1/6W	3
R330		Carbon 390K ohm ±5% 1/6W	1
R854,954 857,957		Carbon 560K ohm ±5% 1/6W	4
R333		Carbon 100K ohm ±5% 1/6W	1
R329		Carbon 15 ohm ±5% 1/6W	1
R514		Carbon 10 ohm ±5% 1/6W	1
R321		Carbon 39 ohm ±5% 1/6W	1
R311		Carbon 47 ohm ±5% 1/6W	1
R117,322 332		Carbon 56 ohm ±5% 1/6W	3
R112,310		Carbon 100 ohm ±5% 1/6W	2
R331,306 309		Carbon 220 ohm ±5% 1/6W	3
R312		Carbon 270 ohm ±5% 1/6W	1
R308,512		Carbon 330 ohm ±5% 1/6W	2
R304		Carbon 470 ohm ±5% 1/6W	1
R305		Carbon 560 ohm ±5% 1/6W	1
R307		Carbon 820 ohm ±5% 1/6W	1
R115,303 314		Carbon 1K ohm ±5% 1/6W	3
R313,323 504,759		Carbon 1K ohm ±5% 1/6W	4

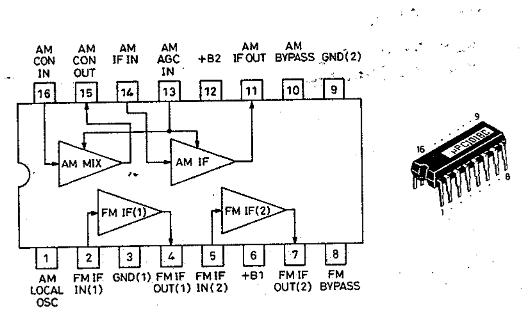
Key No.	Part No.	Description	Q'ty
MAIN PCB ASSEMBLY			
	RESISTORS		
R505,508 509,301		Carbon 1K ohm ±5% 1/6W	4
R866,966 858,958		Carbon 1K ohm ±5% 1/6W	4
R855,955		Carbon 120 ohm ±5% 1/6W	2
R510		Carbon 2.2K ohm ±5% 1/6W	1
R511,853 953		Carbon 2.2K ohm ±5% 1/6W	3
R856,956 506,507		Carbon 3.3K ohm ±5% 1/6W	4
R315,316 325		Carbon 5.6K ohm ±5% 1/6W	3
R328		Carbon 1.8K ohm ±5% 1/6W	1
R116		Carbon 1.5K ohm ±5% 1/6W	1
	CAPACITORS		
C306		Ceramic 7pF 50V ±0.25pF	1
C101		Ceramic 15pF 50V ±0.25pF	1
C108		Ceramic 22pF 50V ±5%	1
C102		Ceramic 30pF 50V ±5%	1
C305		Ceramic 30pF 50V ±5%	1
C315		Ceramic 56pF 50V ±5%	1
C852,952 855,955		Ceramic 100pF 50V±5%	4
C301,307 308		Ceramic 220pF 50V±10%	3
C109		Ceramic 330pF 50V±10%	1
C514,515		BC CON 0.0033µF 25V ±10%	2
C859,959		BC CON 0.0068µF 25V ±10%	2
C111,117 118		BC CON 0.01µF 25V ±20%	3
C119,302 316,317		BC CON 0.01µF 25V ±20%	4
C320,508 509,324		BC CON 0.01µF 25V ±20%	4
C130,131		BC CON 0.01µF 25V ±20%	2
C121		Ceramic 3pF 50V ±0.25pF	1
C864,964		Ceramic 680pF 50V±10%	2
C107		Ceramic 22pF 50V ±5%	1
C314		Tantal 1µF 10V ±20%	1
C313		Tantal 10µF 3.15V ±20%	1
C751		Electrolytic 1000µF 6.3V	1
C312		Electrolytic 100µF 6.3V	1
C765		Capacitor 220µF 6.3V	1
C106		Ceramic 3pF 50V ±0.25pF	1
C110		Ceramic 5pF 50V ±0.25pF	1
C761,762		Ceramic 100pF 50V±5%	2
C112		Ceramic 15pF 50V ±10%	1
C105		Ceramic 0.001µF 50V ±10%	1
C131,764		BC CON 0.01µF 25V ±20%	2
C103		Ceramic 10pF 50V ±0.25pF	1
C865,965		BC CON 0.0033µF 25V ±20%	2
C513,512		BC CON 0.0047µF 25V ±10%	2
C104		Ceramic 15pF 50V ±0.25pF	1
C113		Ceramic 5pF 50V ±0.25pF	1
C115,116 303,304		Ceramic 0.022µF 25V +80−20%	4
C321		Ceramic 0.022µF 25V +80−20%	1
C857,957		BC CON 0.033µF 25V ±20%	2
C502		BC CON 0.047µF 25V ±20%	1
C318		BC CON 0.022µF 25V ±20%	1
C863,963		Mylar 0.15µF 50V ±5%	2
C120		Styrol 120pF 50V ±5%	1
C506		P P CON 0.001µF 100V ±5%	1
C510,511		Electrolytic 0.1µF 50V	2
C851,854 951,954		Electrolytic 0.47µF 50V	4
C504,322 503		Electrolytic 0.47µF 50V	3
C853,953 856,956		Electrolytic 1µF 50V	4
C114,505 323,507		Electrolytic 1µF 50V	4
C501,309		Electrolytic 4.7µF 25V	2
C311		Electrolytic 10µF 16V	1
C752		Electrolytic 22µF 6.3V	1
C858,958		Electrolytic 1µF 10V	2
C758,960 860		Electrolytic 47µF 10V	3

RADIO UNIT

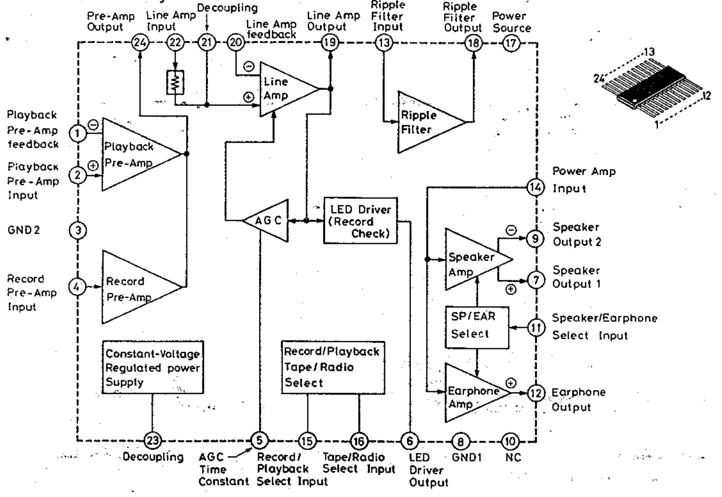
Key No.	Part No.	Description	Q'ty
MAIN PCB ASSEMBLY			
	CAPACITORS		
C754,961 861		Electrolytic 100µF 10V	3
C756		Electrolytic 100µF 10V	1
C753		Electrolytic 470µF 10V	1
C755		Electrolytic 1000µF 10V	1
C319,516 862,962 765	4-223T-11200	Capacitor 220µF 6.3V	5
SOCKET PCB ASSEMBLY			
R72	141-4-233T-96872	P.C Board Ass'y, Socket	1
	4-240T-07371	Socket	2
	4-235T-54200	Socket	1
	4-235T-93300	Socket	1
C763		BC CON 0.022µF 25V ±20%	1

Key No.	Part No.	Description	Q'ty
SWITCH PCB ASS'Y			
R73	141-4-233T-96900	P.C Board Ass'y, Switch	1
S2	4-238T-33600	Switch	1
S1	4-238T-33700	Switch	1
S3	4-238T-33800	Switch	1
D501		LED SLP159B Read	1
D308		LED SLP259B Green	1
	4-240T-14600	Socket, 4P	1
	4-240T-14700	Socket, 6P	1
	4-240T-14800	Socket, 10P	1
POWER SWITCH PCB ASSEMBLY			
R74	141-4-233T-97700	P.C Board Ass'y, Power Switch	1
S4	4-238T-33700	Switch	1
LED PCB ASSEMBLY			
R75	141-4-233T-97800	P.C Board Ass'y, LED	1
D754		LED SLP159B Read	1

µPC1018CE (IF System)

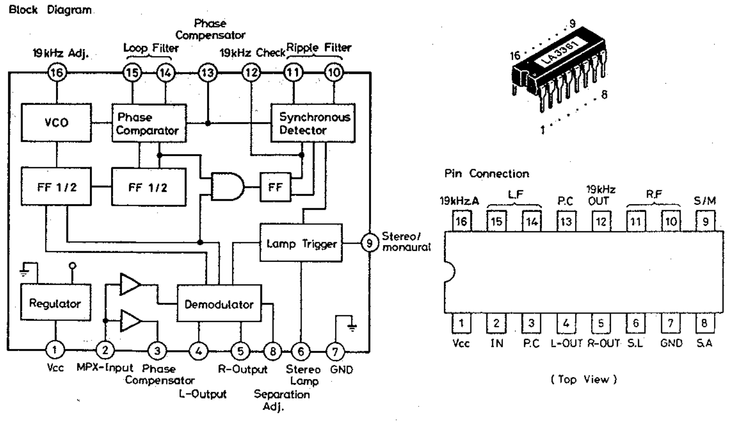


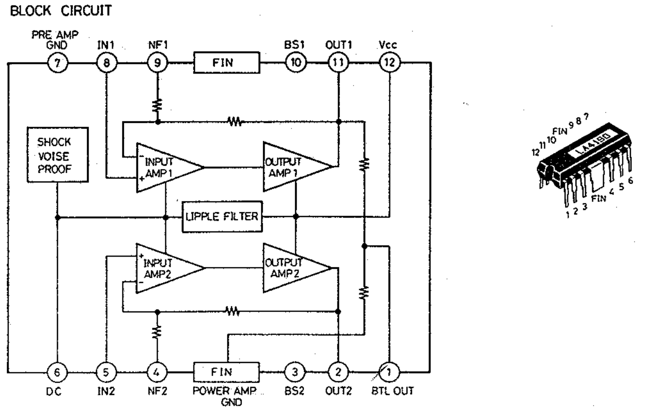
CX-807(Audio System)



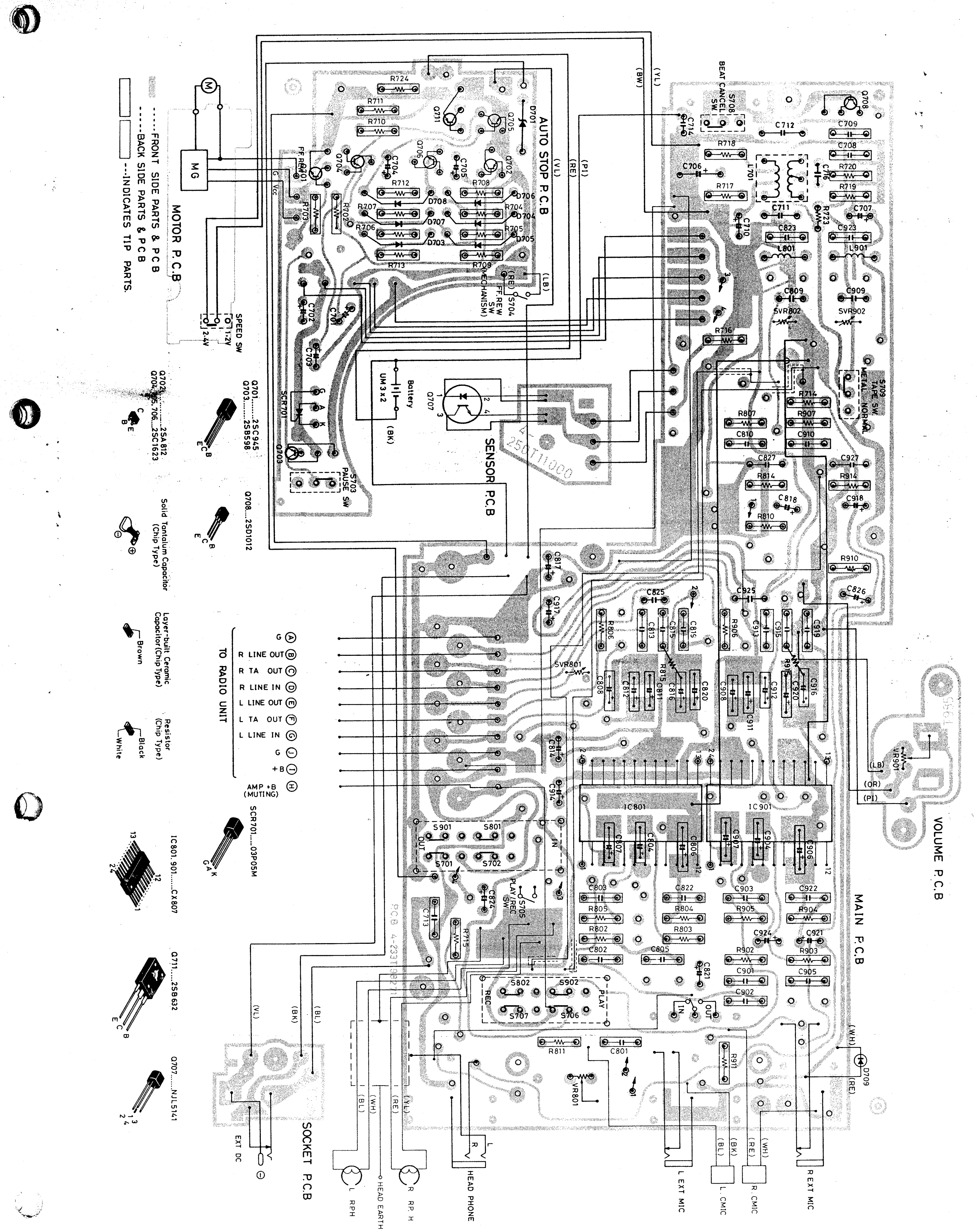
LA3361 (PLL FM Multiplex Stereo Demodulator)

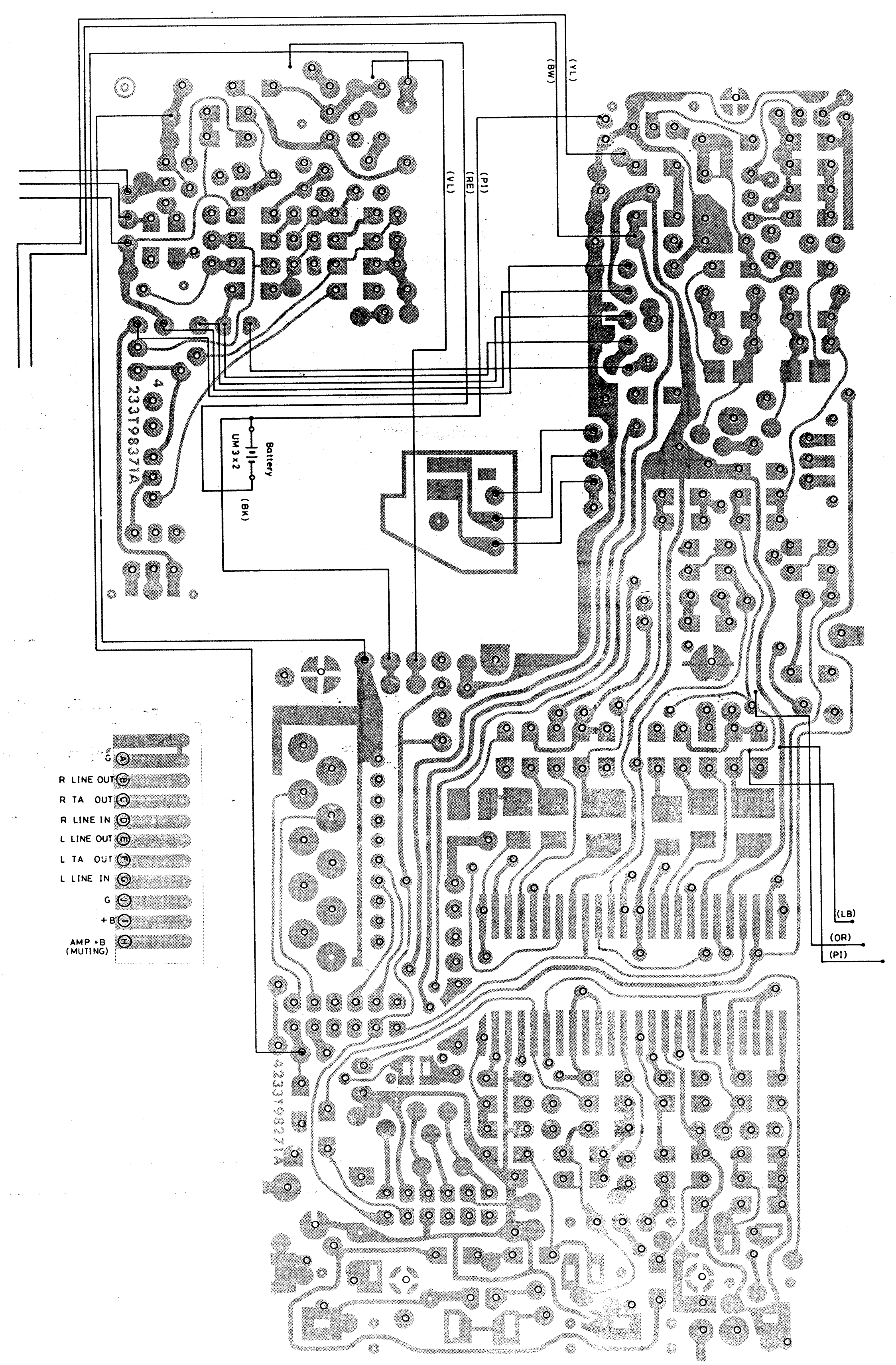
LA4190 (2-Channel AF POWER Amplifier)



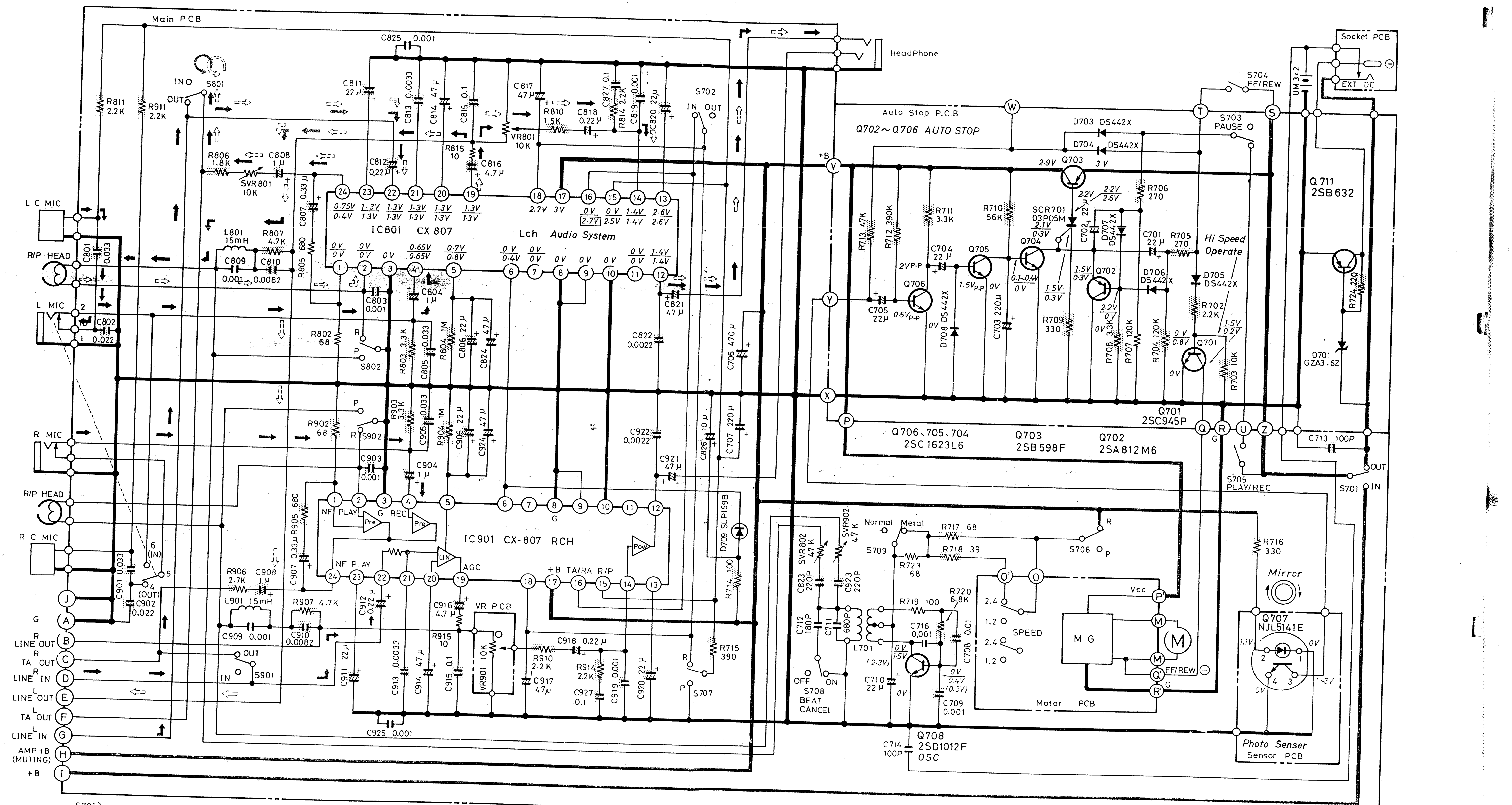


WIRING DIAGRAM (MICRO UNIT)





SCHEMATIC DIAGRAM (MICRO UNIT)



S701
S702
S801
S901 ---Radio/Tape Recorder Unit Select Switch

S703 ---- Pause Switch
S704 ---- Fast Forwerd·Rewind Switch
S705 ---- Play back·Record Switch

S706
S707
S802
S902 ---Record/Play back Select Switch

S708 ---- Beat Cancel Switch
S709 ---- Tape (Normal/Metal) Select Switch

Voltage indicated : IC801, Q708 in PLAY / RECORD

SCR701, Q704 in ON / OFF

Q701 in PLAY. RECORD / F. FWD. REW

Q702 in STOP / RUNNIG

▬ Indicates +B Lime.

▬ Indicates Ground.

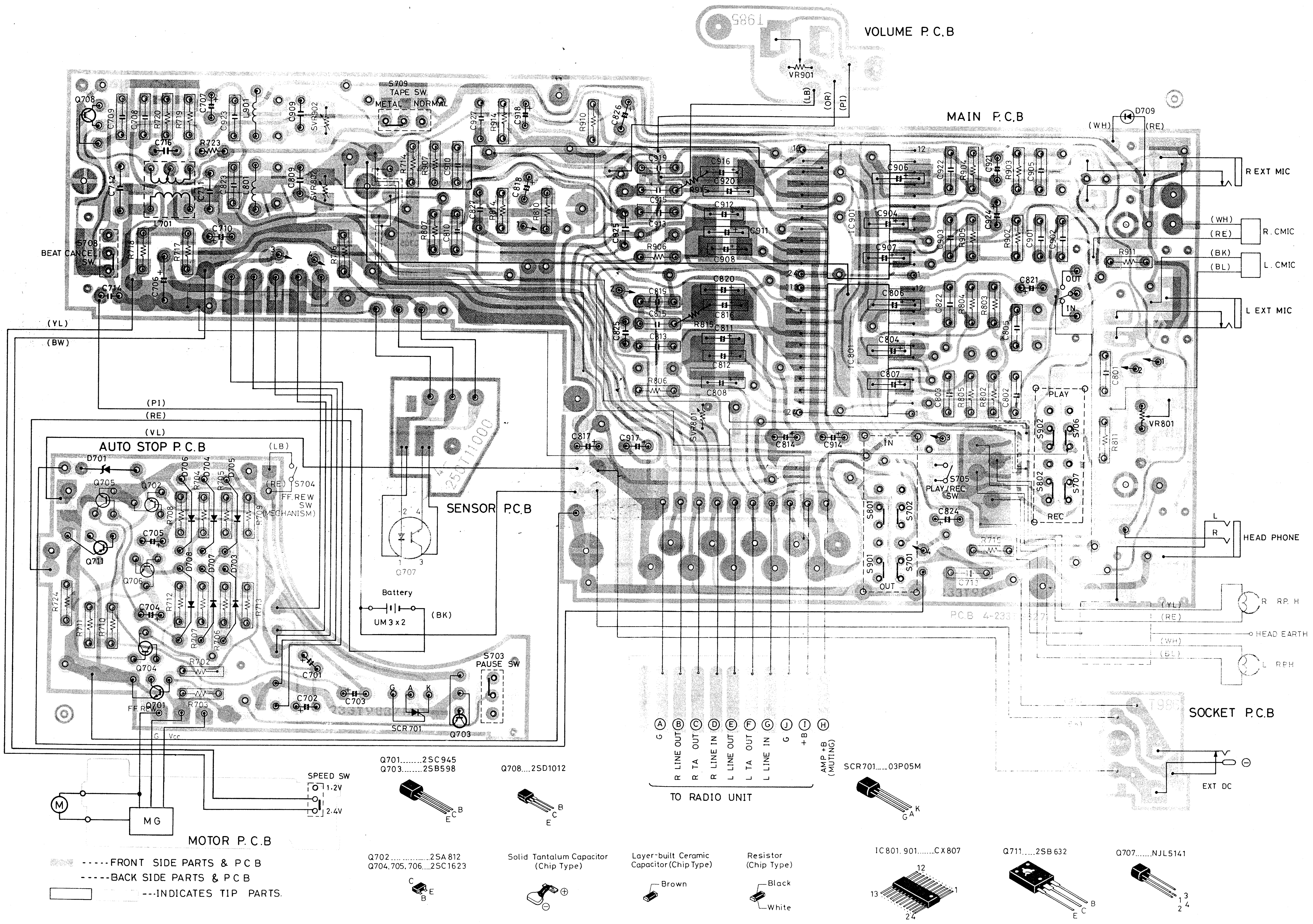
○ Indicates Volume Max. Clockwise.

➡ Indicates signal flow in RECORDING.

⇨ Indicates signal flow in PLAYBACK.

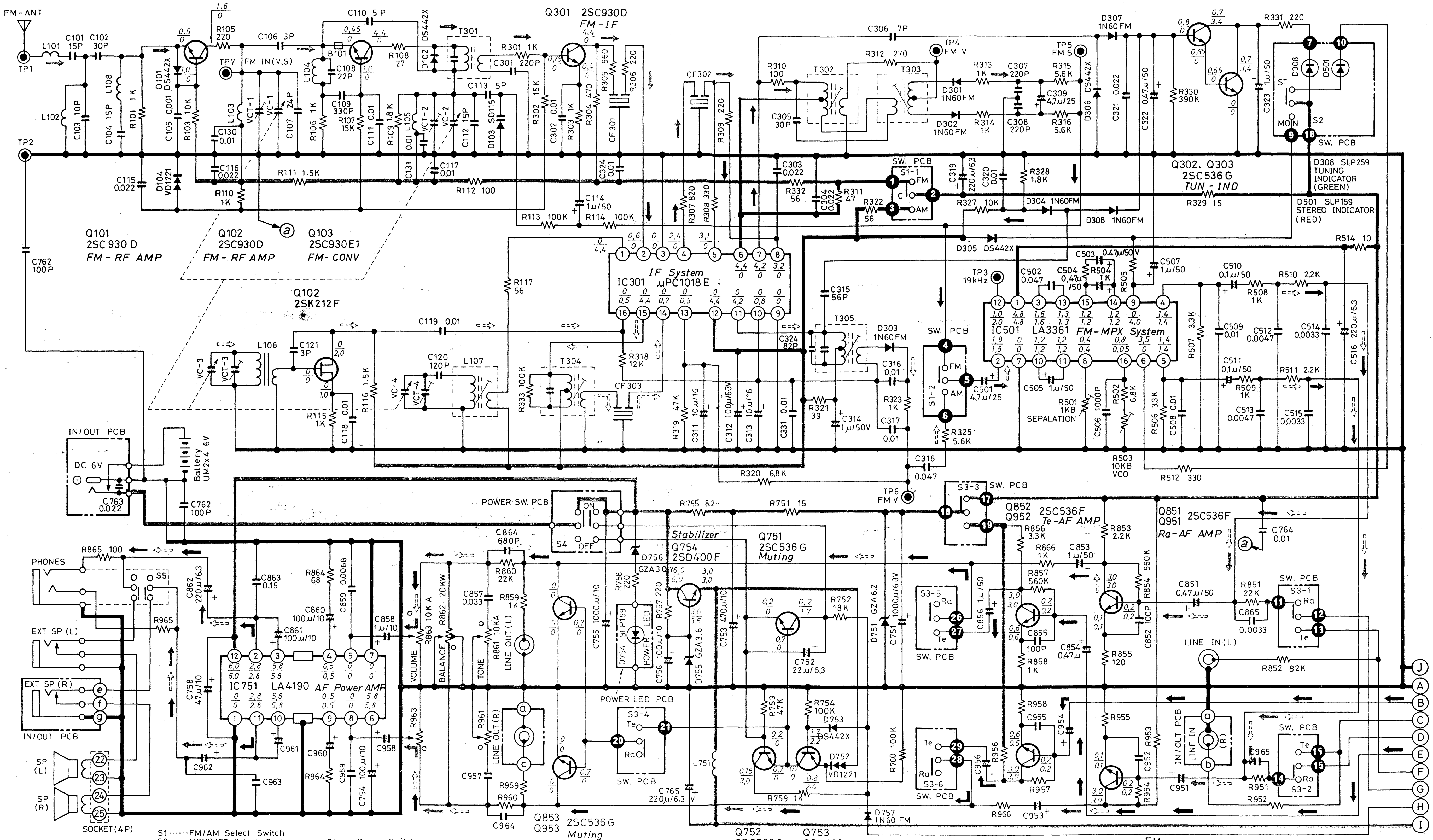
▨ Indicates TIP Parts.

WIRING DIAGRAM (MICRO UNIT)



-----FRONT SIDE PARTS & P C B
-----BACK SIDE PARTS & P C B
---INDICATES TIP PARTS.

SCHEMATIC DIAGRAM (RADIO UNIT)



S1------FM/AM Select Switch
S2------MONO/ST Select Switch
S3------Radio/Tepe Select Switch
S4-----Power Switch
S5-----Phone/Speaker Change (Internal Phone Socket)

----Indicates +B Line.
▬ ----Indicates Ground.
----Indicates signal flow in FM
----Indicates signal flow in AM
➡ ----Indicates signal flow from microcassette.
----Indicates Volume Max. clockwise.

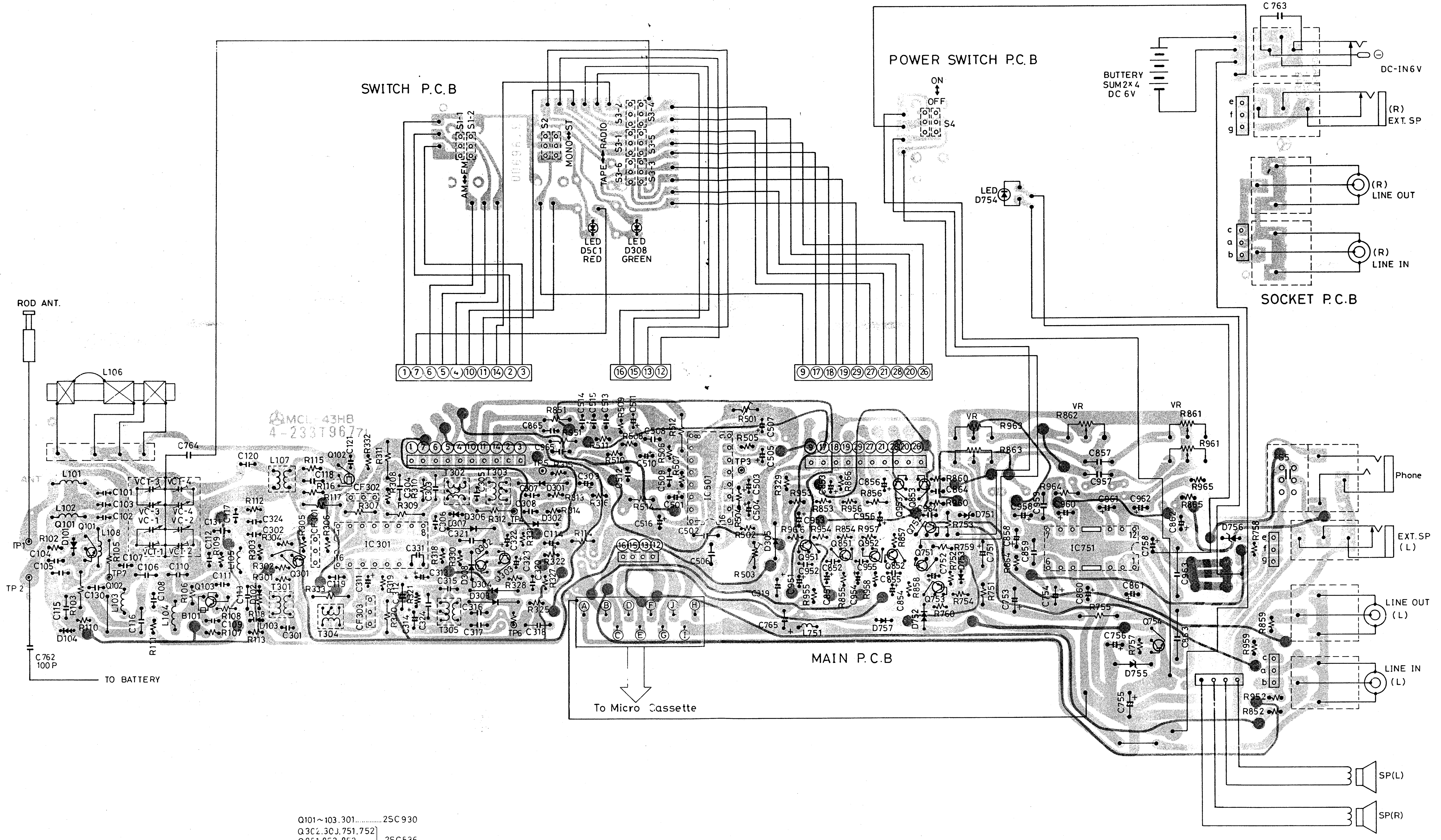
Voltage indicated in $\frac{\text{FM}}{\text{AM}}$ mode, except following Transistors.

Q302, Q303-----LED in $\frac{\text{ON}}{\text{OFF}}$

Q751~Q754, Q851~Q853, Q951~Q953----Muting in $\frac{\text{ON}}{\text{OFF}}$

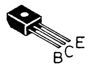
IC501---in $\frac{\text{STEREO}}{\text{MONO}}$ mode.

WIRING DIAGRAM (RADIO UNIT)

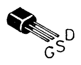


Q101~103.301............2SC930
Q3C2.303.751.752 ⎫
Q851.852.853 ⎬ ...2SC536
Q951.952.953 ⎭

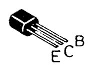
Q101......2SC535



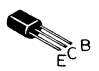
Q102 .....2SK212



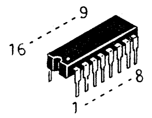
Q104.....2SA608



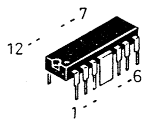
Q754.......2SD480



IC301........μPC1C18
IC501.......LA3361



IC751......LA4190



S1----FM/AM Select Switch
S2----MONO/ST Select Switch
S3----Radio/Tepe Select Switch
S4----Power Switch
S5----Phone/Speaker Change
(Internal Phone Socket)